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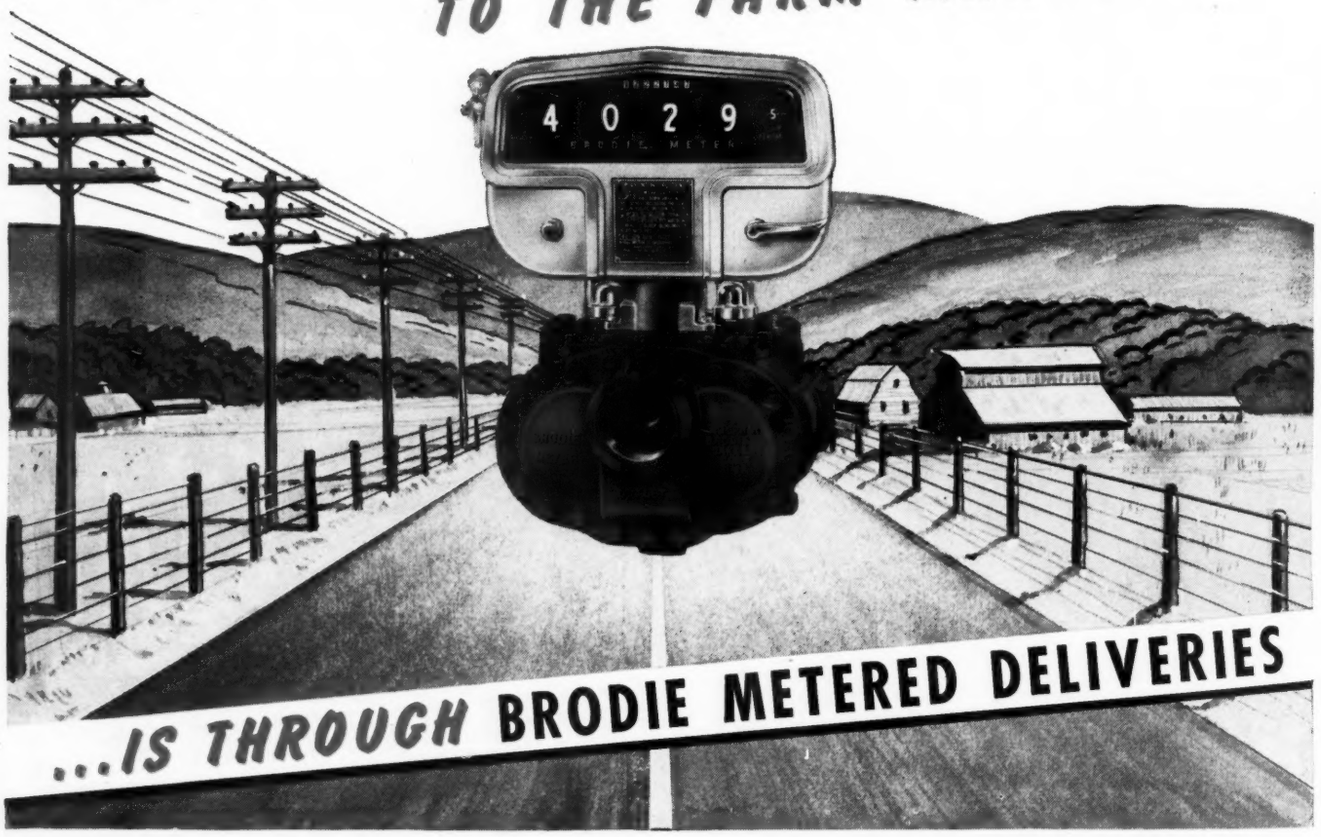
JULY 1946

fueloil & oil heat

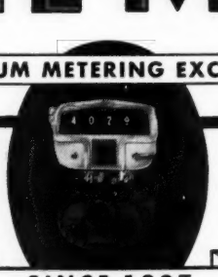
YOUR MOST DIRECT ROUTE TO THE FARM MARKET...



According to recent surveys the farm market offers oil marketers a large potential volume of gallonage business. By computing this market in terms of *Tractor-farms* some idea of its size can be obtained. To insure proper service and coverage of rural customers, tank trucks must be equipped to handle deliveries over scheduled routes with time-saving and error-saving efficiency. This calls for Brodie Quantrol Meters which provide fully automatic delivery control. With the Brodie Quantrol, deliveries can be accurately made by a single operator to elevated storage tanks, to drums in oil sheds or other inaccessible places where long hose discharge is required. All the operator has to do is set the number of gallons to be transferred and then open the valve. When the exact gallonage has passed through the meter, it shuts-off automatically. To serve more rural customers with less effort and at a lower cost equip your tank trucks with Brodie Quantrol Meters. Get full details, *today*.

BRODIE METERS

PETROLEUM METERING EXCLUSIVELY



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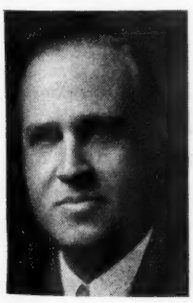
VOL. 5 NO. 3
fueloil & oil heat
JULY
1946

Names in the News

William B. Walrath Jr., has been appointed advertising manager of the Minneapolis-Honeywell Regulator Company, succeeding George Benton who has been appointed personnel manager, according to C. B. Sweatt, executive vice-president. Chandler Murphy, who has been acting advertising manager, has been named assistant to the sales promotion manager. Mr. Walrath comes to M-H from Addison Lewis and Associates, Minneapolis advertising agency, where he was director of research.

Milton A. Powers, vice-president of Timken Detroit Company and chief engineer of the Timken Silent Automatic Division, has been made Director of Engineering, and *E. H. Haugen*, assistant



Powers

Haugen

chief engineer, has been elevated to Chief Engineer. Both Mr. Powers and Mr. Haugen long have been identified with the company, and with the technical phase of the oilheating industry. Mr. Powers is chairman of Technical Committee E on Burner Fueloils of Committee D2 of the American Society for Testing Materials.

H. D. Dale has been appointed manager of the Wood River refinery by the Shell Oil Company, succeeding *R. C. Roberts* who retired June 1, after more than 29 years with the company. Mr. Dale started with the company as a tank

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Attention: **Oil Burner Servicemen!**

Increase
CUSTOMER SATISFACTION ON HIGH PRESSURE BURNERS!
Use this
MAGNIFIER
Only **49¢**
when servicing High Pressure Nozzles!

No watch repairman worthy of the name would attempt to do his work without the aid of a jeweler's eyeglass. Yet thousands of high pressure oil burner servicemen are still endeavoring to examine parts as tiny and delicate as the "insides" of a watch *with only their naked eyes to guide them!*

We refer particularly to the parts that make up the nozzle of high pressure oil burners. Every serviceman knows that failure to spot rough surfaces or specks of sediment in the slots, swirl chamber, or pin-point orifice of a high pressure burner nozzle is one of the biggest causes of faulty operation. As you well know, "call backs" to rectify such faults mean not only still more customer dissatisfaction but a waste of your own time and money.

Illustrated above is a sturdy, practical, shatterproof MAGNIFIER that will enlarge those tiny nozzle parts so that you can clearly examine their surfaces and detect the roughness and deposits that spell trouble. Order your MAGNIFIER today—make it a permanent part of your kit of tools. DON'T DELAY . . . clip the coupon and send it on its way!

GIBSON, PAGE CO., INC.
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GIBSON, PAGE CO., INC.
P. O. Box 1130, Rochester 4, N. Y.
Please send me_____MAGNIFIERS at 49c each, plus 3c each for postage. Enclosed find check____money order____stamps____for $_____.

Name_____

Address_____

gauger at Wood River in 1924 after graduation from the Univ. of Pittsburgh.

M. P. Langdoc has been named assistant export manager for Oil-O-Matic, according to W. A. Matheson, manager of the division of Eureka Williams Corporation. For the last eleven years Mr. Langdoc has been export traffic manager for the Automatic Electric Co., Chicago, and for several years has been chairman of the export-import committee of the industrial traffic council of the Chicago Association of Commerce.

Charles M. Campbell and *S. David Horner* have been made managers of the newly established branch offices of the Perfex Corporation at Cleveland and Detroit, respectively. Mr. Campbell, who joined the company in 1944, had 10 years

Horner

Campbell

of sales work before he went to Perfex. Mr. Horner joined the company in January, 1946, as a sales engineer after receiving his honorable discharge from the Navy as Lieutenant Commander. He formerly was associated with Powers Regulator Company and Carrier Corporation.

Dean Olds, chief design engineer for the major appliance division of Coleman Co., Wichita, Kan., was elected to the Board of Directors. Mr. Olds joined the company in 1929.

F. E. Weldon and *A. C. Kelterborn* have been added to the staff of the New York office of General Controls Co., Glendale, Calif. Both men are engineers who will do sales engineering work.

Harry Boyd Brown, merchandising manager of Philco Corporation for the last 18 years, has resigned to become president of the Good House chain of retail stores in the Philadelphia area.

F-23

Give your clients Indoor Comfort "De Luxe"

. . . with MUELLER Climatrol

REG. U. S. PAT. OFF.

Climatrol is a system for conditioning and handling air . . . which enables you to deliver "Climate Control"

Climatrol is your assurance of providing home owners with True Indoor Comfort . . . and winning their lasting good will. You not only enable them to enjoy today's higher standards of indoor comfort, but you also put them in a position to take advantage of future developments which can be added to the original Climatrol installation.

Indoor comfort depends upon the condition of the air in the home. When you install a system that is *basically designed* to treat and handle *air* — as a permanent "built-in" feature of the home—you are creating a sound long-range investment for your client.

And when it's a *Climatrol* system, you also know that you can depend on the performance record of a company that has specialized in home comfort for 89 years. The Climatrol unit is especially designed for efficiency with oil fuel. Smart, modern appearance. Nationally known, nationally advertised. There is a Climatrol unit to suit every home. Be a Climatrol "comfort merchant" — it pays!

Write for bulletins.

L. J. MUELLER FURNACE CO.

2009 WEST OKLAHOMA AVENUE, MILWAUKEE 7, WISCONSIN

fuel oil & oil heat

Editorial Leaks

It is tough, as the old saying goes, to crowd a new trick into an old dog. It apparently is just as hard to get some of the newer dogs doing modern tricks, for there is news of some of the labor unions using sledge-hammer tactics to "sell" their products to the public. There are stories of coal miners' unions boycotting local merchants and business men who install oilburners, and the United Mine Workers' Local 7300 has passed a formal resolution against the installation of residential oilburners in anthracite areas.

A shadow of things to come is seen in the resolution, which seeks "the cooperation of all industry, labor, public officials and the general public in the anthracite region of Pennsylvania to the end that an active and aggressive campaign be waged to prevent competitive fuels from getting a foothold in the anthracite region." We may expect familiar oil tax legislation to be introduced in Congress in an attempt to compensate for the self-inflicted harm done the coal industry. There is little likelihood of a "no strike" pledge, which would be most effective in luring a jittery public back to coal. The miner has learned to swing his hammer, underground, at the management, and now at the public.

Meanwhile stoker sales are so slow that the industry is in the doldrums. Almost nobody will burn handfired coal, and the loss in tonnage is becoming alarming. In Scranton, capital of the Pennsylvania anthracite region, an estimated 200 oilburners have been installed since the war, and one dealer estimates he could install 100 a week if he could get the equipment. The trend seems to be growing, in spite of all the slugging the opposition can do. The old tricks no longer bring results. The old dog should start to learn some new ones.

◈

The gospel of sound selling, like the older and better-known Gospel, has been repeated so often that people take it for granted, nod their consent to it as sound theory, and proceed to do nothing about the more important matter of living by it. Though true, it is old stuff, and too frequently regarded as advice meant only for others.

A refreshing angle on good selling was propounded in an entertaining way late last month when Red Motley let go an unusually potent talk to a Boston group. It was salted as usual, with illustrative humor, and stories out of a long career of selling everything from brushes to national magazine space.

Mr. Motley warned against complacency in selling, and pointed to the lessons the public has learned about getting along with their old equipment during the war. He also showed that people who have indicated a desire to buy scarce items as frequently "not ready" when the goods suddenly become available.

These warnings have been supported by recent business news items. Automobile manufacturers are fearful that their present cars are in the "luxury" class, and no longer essential. Radio dealers expect a wave of price slashing to move the new plastic table models that are piling up, and a general buyers' strike is being discussed more and more frequently.

Yes, there is a market for 500,000 domestic oilburners per year in the next few years, but nobody is going to take them away from us. We shall have to sell, and keep on selling, or some other industry is going to get the spendable dollar while we wait for the public to bring it to us.

◈

Provision for heating new homes still remains in the after-thought category in spite of the fact the new owner will spend more for fuel in northern latitudes each year than for any other utility. It is more important that the house have an efficient heating plant and a proper distribution system than fluorescent lighting, chrome finished plumbing fixtures, steel kitchen cabinets, or an insulated gas range. Yet, it is usual to see the "modern" touches emphasized—even in technical descriptions—while the mere mention of heating is entirely ignored.

Such oversight is not confined to the real estate dealer who might be excused on the plea that fifty dollars worth of shrubbery will add $200 to the sales value of the house. One of the country's largest manufacturing companies recently released pages of material on their new prefab house, including the usual modicum of praise for the unit by the chairman of the board, but it is impossible to find a line to indicate how, or whether, the house will be heated.

The house will have built-in mirrors, sink storage cabinet, and stall shower. It will have nine windows, two doors, five ventilating louvers, and plywood floors. Waste line will be four-inch, with a two-inch drain from the shower, the cabinet of which will be enameled metal. There is hardly a detail omitted with one glaring exception—no heat!

◈

One harassed manufacturer was found in a confused state in the halls of the hotel during the Boston convention and show. He was mumbling to himself when questioned, and became coherent only with difficulty.

"This country is on the brink of disaster," he said at last. "We are headed for a major depression, and all the king's horses can't hold us back. The hand writing is on the wall."

"What hand writing," we wanted to know.

"I just came out of my room down the hall," he confessed, "after a hard session with one of my best dealers. He is in a bad spot, and has to have three burners within a week. He has two motors, and I think I can get one. We figured how we could get three burners to him by putting together all the parts both of us could muster."

"And that is bad?" we asked, with our eyebrows reaching for the ceiling.

"That ain't bad," he answered. That is the kind of service old Bloto Burner is noted for, but do you know what?"

"No, what?"

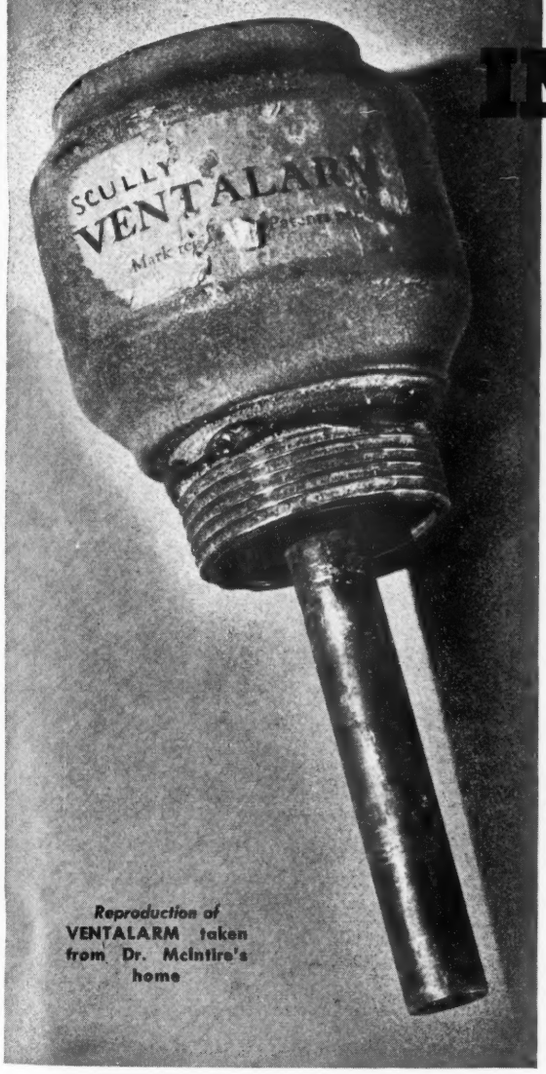
"When we got the deal all put together and a date of delivery settled, HE WANTED TO KNOW THE PRICE!"

It was later whispered around the halls that he was taken away for a rest at a quiet place where attendants wear white coats and carry butterfly nets. After a period of retreat, we expect to hear that our manufacturer friend is glad it all happened. Lots of other now rational people are going to start having trouble unless many more people get interested in price as well as delivery dates.

It repaid 3000%

IN 10 YEARS...

ON ONE DOMESTIC BURNER STORAGE TANK



Reproduction of **VENTALARM** *taken from Dr. McIntire's home*

History of this VENTALARM

In March, 1936, this VENTALARM was installed free by the Briggs Oil Company, Swampscott, Mass., on a single flat 275 gallon tank in the home of Dr. Frederic J. McIntire, 28 Puritan Park, Swampscott, Mass.

In April, 1946, this VENTALARM was removed from Dr. McIntire's home in order that it might be exhibited at the National Oil Heat Exposition at Philadelphia. The VENTALARM is in as good operating condition as on the day it was installed.

The average yearly consumption of fuel oil in Dr. McIntire's home was 3200 gallons a year. The average delivery was 175 gallons per drop (route delivery). 18 deliveries each year — 180 deliveries in the 10 year period. 180 times oil was delivered to the home without disturbing the householder in any way whatsoever.

Savings effected by this VENTALARM

180 deliveries made in 10 years
5 minutes saved at each delivery
900 total minutes saved or 15 hours

15 hours saved
3.00 hourly cost of man and truck
$45.00 DOLLAR SAVING IN 10 YEARS

$ 1.50 ORIGINAL COST OF THE VENTALARM

$$\frac{\$45.00}{\$\ 1.50} = 3000\ \%$$ **on the investment**

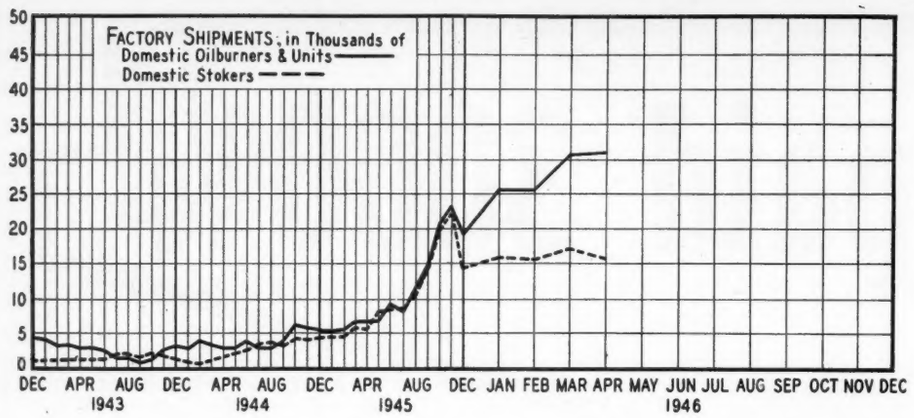
If you're in the fuel oil business, you can make no better investment than installing VENTALARMS on your customers' fuel oil tanks.

There is also a Scully VENTALARM designed to make the filling of gasoline tanks on cars, buses, and trucks safe — speedy — convenient — economical.

SCULLY
VENTALARM
T.M. REG. U.S. PAT. OFF.
The Whistling TANK FILL SIGNAL
SCULLY SIGNAL COMPANY
90 FIRST STREET - CAMBRIDGE 41, MASS.

Manufactured in Canada by **EMPIRE BRASS MFG. CO., LTD., London, Ontario**

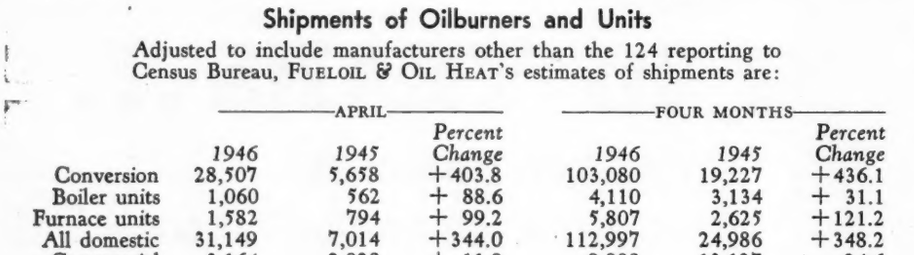
fueloil & oil heat


FACTORY SHIPMENTS, in Thousands of
Domestic Oilburners & Units
Domestic Stokers
DEC APR AUG DEC APR AUG DEC APR AUG DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
1943
1944
1945
1946

Shipments of Oilburners and Units

Adjusted to include manufacturers other than the 124 reporting to Census Bureau, FUELOIL & OIL HEAT's estimates of shipments are:

	APRIL			FOUR MONTHS		
	1946	*1945*	*Percent Change*	*1946*	*1945*	*Percent Change*
Conversion	28,507	5,658	+403.8	103,080	19,227	+436.1
Boiler units	1,060	562	+ 88.6	4,110	3,134	+ 31.1
Furnace units	1,582	794	+ 99.2	5,807	2,625	+121.2
All domestic	31,149	7,014	+344.0	112,997	24,986	+348.2
Commercial	3,164	2,828	+ 11.8	9,888	13,127	— 24.6
Total	34,313	9,842	+248.6	122,885	28,113	+222.4


STOCKS OF DOMESTIC OILBURNERS AND UNITS
(in Thousands) End of Month Shown
Factory Stocks
Dealer Stocks
JUN DEC JUN DEC JUN DEC JUN DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
1942
1943
1944
1945
1946

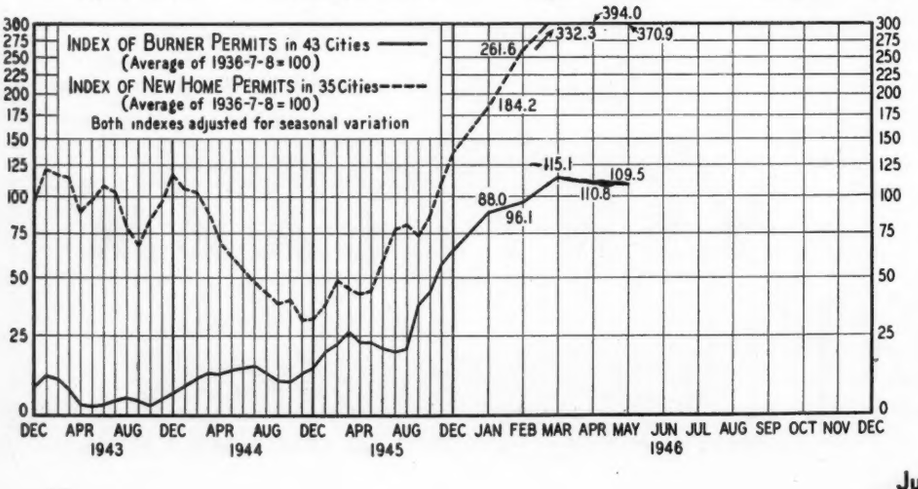
May Minimum Retail Prices: Key Dealers

	CONVERSION BURNERS		BOILER-BURNERS		FURNACE-BURNERS	
	*Top price**	*Low price*	*Top price**	*Low price*	*Top price**	*Low price*
Highest	$448	...	$900	...	$800	...
Lowest	250	...	400	...	400	...
May Aver.	290	...	571	...	538	...
April Aver.	289	...	570	...	518	...

*Top price key dealers for conversion burners are those whose minimum retail prices are $200 or more, for boiler-burner and furnace-burner units (exclusive of ductwork) those whose minimums are $400 or over.

Price Index: Conversion Burners: January 1940 is 100%

WHOLESALE				RETAIL			
May	125.7	Six months ago	119.0	May	132.3	Six months ago	117.6
April	123.3	Year ago	115.6	April	126.1	Year ago	114.3



Oilheating Trends

OILHEATING INSTALLATIONS in May broke through the pressures that had squeezed them down in March and April and reached 43,142, for the largest month since before the war and the second largest month in the history of the oilheating industry. The previous peak was 48,959 in September 1940. Total installations for the first five months were 139,793, an all-time high for that part of the year. However, it is important to recall that seasonal patterns mean nothing this year, and won't until we catch up the demand backlog. But for the record, installations in the first five months of 1941 were only 101,392 and in the same period of 1940 were 78,045. All of the foregoing figures relate to domestic equipment only, conversion burners and units.

New orders booked by dealers in May were lower than installations, and are estimated at 33,166. Total orders booked in the first five months are estimated at 178,557, or about 28% more than installations. In the closing five months of 1945, or approximately from V-J Day to New Year, total installations were around 110,000 while orders taken in the period were about 240,000, or 118% more than installations.

Adding the two periods, or ten months since hostilities ceased, orders taken were approximately 420,000, installations were 250,000, leaving an unfilled backlog of about 170,000. Dealers, in turn, have on order with manufacturers something over 568,000 domestic burners and units or a little more than three times their own unfilled backlog.

May sales were divided: 91% conversion burners, 5% boiler-burner units and 4% furnace-burner units.

BURNER STOCKS: Dealer stocks of domestic oilburners and units on May 31 were approximately 8,518, compared with 11,730 the month before, showing that in May there was less time lag between receipt of burners from factories and installations. Factory stocks on April 30, the latest available data, were 4,000.

SERVICE INCOME: May service department income of reporting dealers averaged $2,347, up nearly 20% from $1,961 reported by the identical dealers for May 1945. May income, however, was con-

siderably down from April's average of $3,634.

NEW HOME OILHEATING SALES: Among all dealers reporting from all sections of the country, just one-third had on hand May 31 orders for oilheating in new homes. Most of these, however, had orders for only a few jobs, ranging from two to 20, and only about six per cent of them had orders for 50 or more installations, indicating that they were taking business from the larger professional builders. As would be expected, volume greatly affected the price received. Of all those dealers who have new home business, 45% sold such work at no discount from retail prices, but their total number of orders is only nine per cent of the total new home work reported.

The dealers selling to larger builders, representing 46% in number of dealers doing new home business, have 81% of the total orders, and their average sale price for such work is 24.2% below their retail prices. A third lot of dealers among those taking new home work, representing nine per cent of such dealers and doing 10% of the business, handle it on a cost-plus basis, with the average rate being about 20% above primary costs (material, labor, delivery, etc.).

Total orders on hand May 31 for oilheating in new homes throughout the country were approximately 20,090. The Civilian Production Administration believes that about 20% of the 531,016 home authorizations granted to the end of May indicate the use of oilheating; apparently only about a fifth of the burner orders have been placed.

All reporting dealers, whether or not they have new home business, gave their opinion on the ratio of fuels being used in new homes in their communities. The composite opinion by sections is:

Fuels Used in New Homes

	Oil	*Gas*	*Coal*
New England	81%	10%	9%
Middle Atlantic	46	39	15
Midwest	10	58	32
Pacific Northwest	35	5	60

At first glance it would appear that oil will get far more than the 20% estimated by CPA, but in another article in this issue it is shown that the strong oil areas, New England and Mid-Atlantic, are not getting many of the new home authorizations.

Of all the new home work scheduled by the reporting dealers, 25% will include only a conversion burner, 26% involves a complete heating unit, while 49%, or nearly half, include the complete heating system for the house. Large builders prefer to have one firm do the whole job.

In general, the oilheating dealers are not going out after new home business, but it is being brought to them. . . . 85% say that the builders are seeking the burners and urging the dealers to do business with them, while only 15% say that they are actively soliciting builder business (and they are not the ones who are getting the volume).

Asked if their local association is doing anything particularly to try and swing this builder work to oil, only six per cent of reporting dealers vote "Yes." The job most talked of is the campaign recently started in Westchester County, New York, one of the few Eastern areas having particularly serious gas competition. One dealer points out that his local group discussed promotion of this kind, and then decided to wait until they could fill the long deferred orders on their books —otherwise they might antagonize the patient and long waiting buyers.

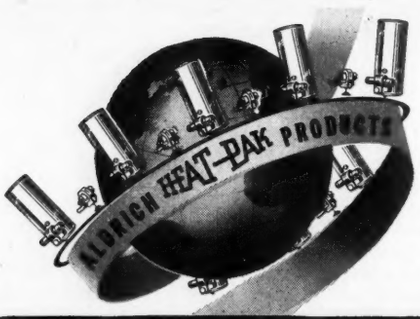
VHP-1 APPEALS: Since the time when

(*Continued on page 107*)

Oilburner* and Building Permits

	OILBURNERS				DWELLINGS			
	May		5 MONTHS		May		5 MONTHS	
	1946	*1945*	*1946*	*1945*	*1946*	*1945*	*1946*	*1945*
Albany, New York	..	..	..	..	..	..	..	..
Baltimore, Maryland	534	..	..	..	549	1	2034	29
Binghamton, New York	..	..	..	..	20	1	42	10
Boston, Massachusetts	335	69	..	265	7	2	94	2
Bridgeport, Conn.	63	18	241	66	..	..	..	..
Buffalo, New York	..	..	..	..	26	5	..	15
Des Moines, Iowa	..	..	..	..	156	1	488	4
Detroit, Michigan	102	18	..	..	808	19	4609	554
Elizabeth, N. J.	56	2	168	16	0	..	7	..
Freeport, New York	43	3	134	24	..	..	..	..
Greenwich, Conn.	..	..	..	..	10	0	75	1
Hartford, Conn.	71	24	..	53	..	..	..	..
Irvington, N. J.	81	2	193	14	1	0	7	0
Lynn, Massachusetts	..	..	..	..	7	1	26	1
Meriden, Conn.	22	..	..	..	..	..	..	..
Milwaukee, Wisc.	122	7	359	22	227	77	813	..
Minneapolis, Minn.	61	8	231	74	125	84	717	187
Montclair, N. J.	55	2	166	13	..	..	..	..
Mt. Vernon, New York	61	11	186	53	..	..	..	..
New Bedford, Mass.	39	21	229	126	..	..	..	..
New Haven, Conn.	52	5	137	19	..	..	..	..
New Orleans, La.	0	0	0	0	..	..	..	..
New Rochelle, N. Y.	32	0	102	70	6	0	61	0
Norfolk, Virginia	16	3	121	..	22	5	99	15
Oakland, Calif.	1	1	2	1	..	..	..	..
Omaha, Nebraska	68	6	311	38	104	23	370	106
Orange, New Jersey	36	2	92	3	0	0	3	0
Passaic, New Jersey	56	4	161	..	..	..	..	..
Paterson, N. J.	110	10	331	27	2	1	22	1
Philadelphia, Pa.	463	..	2086	..	..	..	..	..
Plainfield, N. J.	..	..	..	..	6	0	48	0
Portland, Maine	36	11	160	31	23	0	56	0
Portland, Oregon	..	..	..	..	194	94	1108	160
Providence, R. I.	90	7	350	36	3	0	27	0
Reading, Penna.	..	..	..	..	18	1	49	1
Richmond, Virginia	37	1	185	2	98	33	663	285
Rochester, N. Y.	60	0	234	8	..	..	..	..
Rockville Center, N. Y.	19	8	81	20	7	0	13	0
Salem, Massachusetts	12	6	60	14	1	0	7	0
St. Louis, Missouri	45	7	236	46	36	0	152	0
St. Paul, Minnesota	111	6	541	49	181	71	587	182
Schenectady, N. Y.	5	6	118	20	..	..	..	..
Seattle, Washington	..	..	..	..	251	141	1239	568
Springfield, Mass.	..	..	..	..	61	8	282	11
Stamford, Conn.	26	1	100	23	..	..	..	..
Syracuse, New York	24	..	96	..	24	21	87	44
Trenton, New Jersey	..	..	..	..	0	0	0	3
Utica, New York	..	..	..	..	5	0	..	1
Washington, D. C.	94	9	764	112	..	..	..	..
West Orange, N. J.	..	..	..	..	31	2	54	2
White Plains, N. Y.	22	6	103	36	4	1	16	1
Wilmington, Delaware	58	2	255	8	9	0	89	0
Worcester, Mass.	45	14	259	88	..	..	..	..
Yonkers, New York	63	7	..	..	..	..	..	..
Totals	2646	307	6328	1059	3022	592	13131	2183
Percent Change	+761.8		+497.5		+410.4		+501.3	

*Permits are not total sales in each market since none are reported from suburban areas, which normally account for 20% to 60% of total sales in each market; nor are they an accurate index where enforcement is lax. Rightly used, however, they are a useful working index.



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You Can Train Veterans

Government Pays Share in Apprentice Training for Oilheating

As soon as production bottlenecks can be broken, leaders of the oilheating field expect the industry to enjoy the greatest expansion of its history, satisfying the long pentup demand for new oilheating units.

But more than mere access to materials will be required to meet the anticipated flood of business. Oilheating sales firms must have an adequate supply of trained workmen who can service orders as they pour in.

Skilled workers obviously cannot be recruited at the drop of a hat. It takes from two to three years to fully train a man either to install or to repair heating units.

Since the war ended 10 months ago, some oilheating dealers have learned to draw upon a new source of potential trainee-manpower. It consists of millions of former servicemen who are looking over virtually all fields to select a trade with a future.

Well over 50,000 business establishments, including numerous oilheating dealers, already have tapped this source of potential learners, aided by the job training provision of the Servicemen's Readjustment Act (G. I. Bill).

Under the Act, a veteran pursuing on-the-job training and receiving the usual beginner's wage paid to apprentices in that field also is entitled to receive a G.I. subsistence allowance which may not exceed $65 a month if he has no dependents or $90 a month if he has dependents. But the total amount of wages paid to the apprentice, plus the subsistence allowance, may not exceed the beginning entrance wage of journeyman for which the veteran is being trained.

As a result of the G.I. subsistence allowance, veterans with exceptional ability, who ordinarily would not consider apprenticeship, have been enrolling in on-the-job training programs by the thousands. These ex-servicemen and women are forming a reservoir of skilled employees from whose ranks might come many of tomorrow's leaders.

Business organizations that have drawn upon this source of manpower often have been surprised at the simple procedure necessary to follow to establish G.I. training programs. Several establishments have reported that the entire routine, from the first step to the time the veteran actually began training, took but a few hours.

How to Qualify

Assume that an oilheating dealer decides to prepare for the business boom he knows will come by training a veteran for a position such as installation or service man. For his first step, he writes to the state approving agency that has been designated to approve places offering such job training courses. The letter need merely state that the firm wants to train a veteran for a certain position under the G.I. Bill. The dealer can obtain the name and location of the state approving agency from the nearest VA regional office.

Within a few days, the dealer will receive a form from the state agency. It will ask for a detailed account of the firm's business activities, the qualifications of the instructors, the type of training to be given, and similar data. The state agency also will send a representative who will discuss the anticipated program with the dealer and will help him prepare a training schedule if the dealer asks for such help.

Next, the firm submits to the state approving agency a thorough description of the training program designed for the veteran-trainee. Each phase of the training program should be described in as full detail as possible.

When the state approving agency receives the company's planned training schedule, it will weigh its merits. Among the questions it will attempt to answer will be these:

1. Is the business organization offering a bona fide course of training and does it have the facilities to carry out a training plan to benefit the veteran?
2. Will the training course be sufficient to prepare the veteran for the position for which he is aiming?

As soon as the firm receives notice that the state agency has approved its course, it can begin to teach veterans under the G.I. Bill.

Upon enrolling a veteran in an on-the-job training course, the firm will supply VA with a statement describing the trade or position for which training is to be given, the length of the training course customarily required, the monthly salary or wage payable to the trainee and the salary or wage paid to the beginning journeyman workman in the position for which the veteran is preparing. The firm also will indicate its willingness to furnish VA a monthly certificate showing the attendance record and the amount which has been paid to the trainee each month, directly or indirectly, as wage, compensation or other income.

Training plans in the oilheating industry obviously will vary from company to company. While one dealer may train a veteran to become a specialist in wiring oilburner units, another might establish a program to teach exservicemen how to clean and adjust.

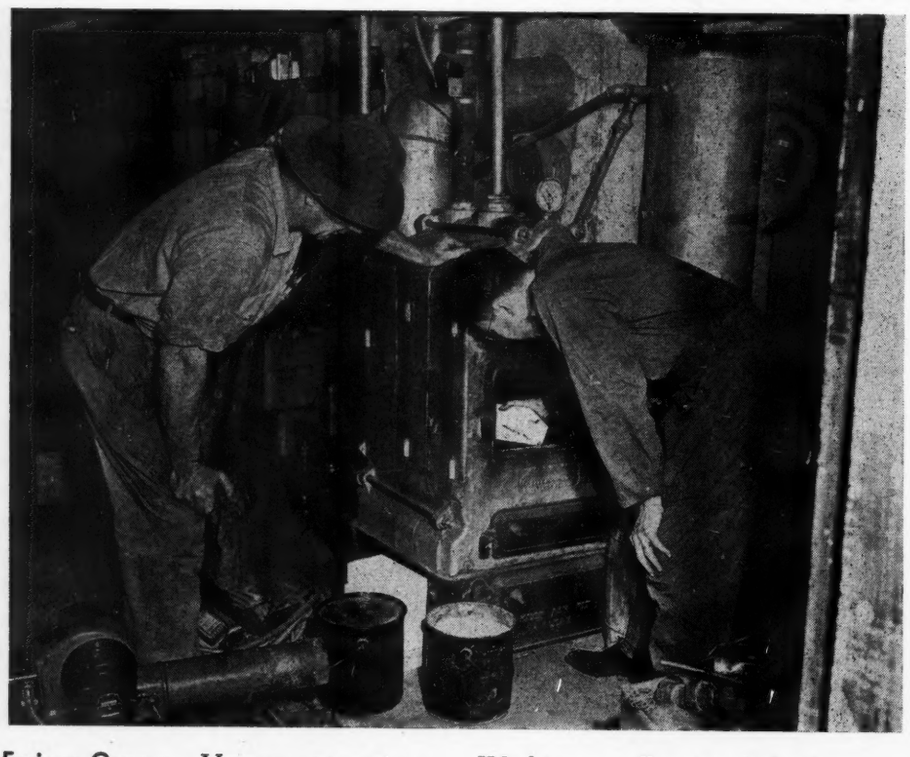
A great number of oilheating dealers have planned training courses of a general nature, slanted toward preparing veterans to handle all the numerous duties involved in installing and servicing oilheating units. The length of these courses generally varies from two to three years.

Roughly, the generalized training plans can be broken down into three major sections:

1. Installing oilburners.
2. Installing heating units and boilers.
3. Servicing oilburners and boilers.

In learning to install an oilburner, a veteran-trainee will be shown how to handle all the pipe work necessary to connect the tank; he will help build a firebrick combustion chamber and insert the burner unit; and he will aid an electrician in wiring up the entire oilburner as well as making meter connections and wiring controls. In learning the entire wiring procedure, a trainee has an excellent opportunity to obtain a general knowledge of the intricacies of an oilburner.

After a veteran has completed his two or three-year course in oilheating equipment, he should be qualified to take his place among a dealer's experienced installation and service men. He may not know the answers to all the problems, but he should be able to handle enough work to be well worth his wage.



Enrique Canova, *Veteran apprentice to a Washington oilheating dealer learns to install firebrick from his instructor Gerald Amman. Below, he connects an oil line. Canova gets $65 a month from Government, plus pay from dealer.*

Many dealers contemplating job training programs have asked whether all veterans are eligible for on-the-job education.

Before an ex-serviceman can take G.I. training, he must meet certain requirements. He must have been in active military service for 90 days or more, part of which was on or after September 16, 1940, and he must have been discharged or released under conditions other than dishonorable. He also is eligible if he has had less than 90 days active duty and was discharged for an actual service-incurred disability.

The period of education or job training to which he is entitled depends upon his length of active service. He can receive one year of training plus an amount equal to the time he spent in the armed service. Four years is the maximum training he can obtain.

For example, if a veteran has had two and one-half years active military service, he will be eligible for three and one-half years on-the-job training. However, if he has had three and one-half years military duty, he can sign up for only four years of training, the maximum.

The procedure followed by a veteran in applying for on-the-job training is even simpler than that necessary for the firm offering such training. The ex-serviceman drops into the VA contact office nearest his home, asks for Form 1950 which is an application for education or training, fills it out, and sends it, along with a photostatic copy of his discharge, to the nearest VA regional office. The VA contact representative can supply its address.

The VA regional office verifies his records with the War or Navy Departments as to his length of service, dates he served, and the conditions under which he received his discharge. After VA determines his eligibility, it will send him a "Certificate of Eligibility and Entitlement," which is his key to training.

The veteran presents his certificate the first day he reports for on-the-job training to his employer, who endorses it as indicated, and mails it to the VA regional office. When the regional office receives it, the veteran's name is placed on the subsistence rolls and shortly thereafter he

will begin to receive Government checks in addition to his firm's paychecks.

The VA keeps itself informed as to the veteran's progress in an on-the-job training course, although actual supervision of training establishments is vested in the state. VA has obtained a battery of training officers who make monthly check-ups to determine whether the ex-G.I. is actually pursuing the course of training at the place where he is enrolled and whether his conduct and his progress in the course are satisfactory.

Training officers will obtain this information only from those recognized institutions that are unable to furnish VA with regular reports on student attendance and grades of veterans training under the G.I. Bill.

Because the vast majority of veterans are able-bodied, the foregoing description of their job training rights has been confined to the Servicemen's Readjustment Act, which pertains to them. Another act, Public Law 16, governs training regulations for disabled veterans.

Requirements for job training eligibility are similar to those for non-disabled veterans, with a few exceptions. The veteran's disability must be service-connected and one for which a pension is payable, and he must be in need of vocational rehabilitation to overcome the handicap of his disability. There are no minimum requirements for length of active military service.

VA not only supervises his training closely, but also pays him a disability pension or retirement pay in addition to his subsistence allowance.

Surveys conducted by VA and private interests brought to light the fact that disabled workers, properly placed, are equal or superior to average able-bodied workmen in the quality and quantity of production.

Undoubtedly there are numerous positions in the oilheating industry that can be filled efficiently by America's disabled ex-servicemen. All they require is the chance to enter a job-training program that will equip them to hold a skilled position in which their disabilities would not be handicaps.

For both the disabled and the able-bodied veteran, VA's on-the-job training program has meant the opportunity to readjust to a successful civilian life and to become a productive member of our society.

For industry, the job training provision of the G.I. Bill has meant the opportunity to obtain necessary new blood in order to meet an increased volume of business expected as soon as production once again enters high gear.

Additional Fueloil Grade Predicted By Jersey

THE EAST WILL PROBABLY have a three product market for light fueloils in the not too distant future, according to a prediction of S. H. Hulse, Standard Oil Development Co., in a paper read before the Eighth Annual Convention of the Fuel Oil Distributors Association of New Jersey at Asbury Park June 7. The three products, replacing the present two in the area, would include a close-cut kerosene, a fairly heavy catalytic distillate and an in-between product for vaporizing burners.

Ten speakers on various topics filled the two-day session, the first to be held by the group since 1941, and attended by virtually the entire membership of 300 fueloil men. In the June issue of FUELOIL & OIL HEAT appeared the talk, "Oilheating Crossroads," made by Robert Gray of this publication. Points of general industry interest in the other talks were many, and are briefly summarized or quoted here:

The Stewart Hulse paper, read by J. O. Collins of the same company because Hulse was unexpectedly called away, can be summarized in these paragraphs:

"It is expected that in order to meet the demand for gasoline and distillate fuels in the years to come, U. S. refineries will maximize the yields at the expense of residual fuel. *i.e.*, the average refinery yield of residual fuel will decline over a period of 15 to 20 years from the present 26% on crude supply to possibly as low as 10% on crude. It will be necessary to import residual to meet the deficit in heavy fuel stocks. This situation is for the best interests of the country in that such imports of fueloil or heavy fuel-producing crudes will be supplementary rather than competitive in nature, permitting domestic crude to be run for maximum yield of more valuable products.

"After considering the various uses of kerosene, such as for illumination, range oil, and for space and water heating, it is believed that the increase in demand will be moderate over the next few years. Domestic demand is estimated at about 236,000 B/D in 1950 as compared to about 208,000 B/D for 1946, an increase of approximately 13%. This takes into account the possible increased use of liquefied petroleum gases as a substitute for kerosene in certain applications.

"There are about 2½ million vaporizing pot-type burners in use at the present time and the manufacturers of these burners have estimated that an additional 750,000 burners will be sold annually during the next five years. (Includes space heaters, water heaters, central heating, etc.)

"At present there are an estimated 2½ million power operated oilburners in U. S. homes, normally consuming an average of a little more than 50 barrels per year. Projections of the market for home heating indicate a substantial increase in oilburner installations, to reach approximately 3¾ million in 1950 and 4.8 million by 1965. This means an increase in demand for domestic fuel from about 350,000 B/D in 1946 to approximately 500,000 B/D in 1950 and 565,000 B/D in 1965, an overall increase of about 60%.

"During the war, there were built in the U. S. A. a large number of cracking plants of the new catalytic type. This process was of inestimable value in producing the enormous amounts of products required for the war. It also has remarkable value in the production of peace-time products. It produces high yields of gasoline and distillate fuels. In fact, this process is an important factor in getting a large volume of distillate products at the expense of residual fuel.

"Let us see what effect these additional distillate fuels have on the quality of heating oil. The quality of catalytic distillates has been the subject of much discussion in the past year or so. You have heard that they would drastically affect fuel quality and that many burners would probably suffer serious consequences unless they were redesigned. The Standard Oil Co. (N. J.) does not agree with these

TABLE I
Average Quality of No. 2 Heating Oil
Major Suppliers, Northern N. J.

	Last Four Prewar Years	*1942*	*1944*	*1945*
Gravity, °API	36.4	35.9	32.6	32.9
Diesel Index	52.8	52.0	43.5	44.5
Percent Distilled @ 440°F.	20.1	15.9	10.5	13.0

general statements. However, a downward trend in volatility of heating oil, particularly No. 2 fueloil can be expected. As with the better known thermal cracked oils, the catalytic cracked oils have lower API gravities and lower Diesel Index.

"The effect of these changes is shown by the trend which has taken place in No. 2 fueloil quality in New Jersey in the past eight years, as shown in Table I.

"A steady reduction in gravity, Diesel Index and volatility is evident, reflecting to some extent the wartime drain on supplies which finally led to relaxed quality specifications for distillate fuels under Directive 59.

"Having in mind that the new wartime refinery processes might affect the supply and quality of postwar fueloils, the Bureau of Standards early in 1944 asked the petroleum and oilburner industries to review the present CS12-40 (Commercial Standard) in the light of postwar fuel quality. As a result, the American Society for Testing Materials undertook a product research program to learn what changes in standards would be desirable to match the expected fuel quality with the performance of existing and new oilburners.

"Two reference burner fuels were selected for tests that were to be run by 34 industry laboratories. No. 1 fuel was composed of about 25% catalytic distillate and 75% straight run, and No. 2 was entirely catalytic. Specifications were as shown in Table II.

TABLE II
ASTM Reference Burner Fuels

	No. 1	*No. 2*
Gravity, °API	37.9	28.7
Diesel Index	51.0	33.0
10% Dist. Point, °F.	403	459
End Point, °F.	590	680

"Upon completion of the tests, the ASTM committee reviewed the results and reached the following conclusions:

"The majority of the laboratories reported that neither the No. 1 or No. 2 reference oils, nor blends thereof are satisfactory for vaporizing pot-type burners. The majority of the laboratories reported that both fuels and blends thereof can be burned satisfactorily in high pressure, low pressure and wall flame rotary burners, in some cases with minor modifications of combustion chamber or air adjustment. Existing installations of wall flame burners may require some changes in hearth design to burn the No. 2 fuel.

"The pot-type burner industry is not satisfied with the prospect of having to burn range oil or kerosene. They have asked for a special heavier No. 1 fueloil which would be held to very strict upper and lower viscosity limits for flow control and which would carry other restrictions on quality not heretofore imposed upon the oil industry. To the refiner, the production of a heavy No. 1 fueloil may not be unattractive because he could produce more of it from crude than kerosene or range oil, and thus be in a better position to meet the expected increase in new housing, etc. However, it would still be necessary to provide kerosene for wick-burning and some other appliances.

"It is probable that distributors may be called upon in the not too distant future to supply the public with three grades of burner fuel, namely, kerosene or range oil, a new No. 1 fuel for pot-type burners and a general purpose heating oil for the popular types of mechanical burners."

Atlantic Refining's economist, E. T. Knight, reassured the assembled group on the apparent adequacy of fueloil supply, showing particularly how the industry is to get through the next 20 years. In these forecasts it was assumed that by 1965 there would be 4,650,000 oilfired domestic central heating plants consuming 586,000 barrels of light fueloils daily, and that there would be 42.5 million passenger cars and 6.5 million trucks. Total consumption of all petroleum products was forecast to be 4,853,000 B/D in 1950, 5,063,000 B/D in 1960 and 5,400,000 B/D in 1965.

"To produce crude at these rates," Knight continued, "the United States oil industry must find and develop during the next 20 years at least 40 billion barrels of new reserves, or nearly 76% of the total amount of oil discovered since 1859. Approximately 40 billion barrels of the total discoveries of 52.3 billion barrels were found during the last 20 years, and 21 billion barrels of the additions to reserves were recorded for the 10 year period 1936-45. It is therefore indicated that the annual task for the next 20 years is no greater than that of the last 10 years when 2.1 billion barrels of oil were added to the reserves annually.

"The best tools and methods of research have not made it possible to forecast with any degree of accuracy at what rate discoveries will be made. However, on the nearly 5.1 million developed acres in the United States there have been discovered approximately 52.3 billion barrels, and the total area of the United States considered favorable to the production of oil amounts to nearly 900 million acres of which only 20% or 180 million acres are already under lease and being explored or awaiting exploration. The extent to which the industry is engaged in the search for new fields is indicated by the fact that there are now 562 geological and geophysical crews engaged in exploratory work in the United States."

D. L. Barrett, fueloil manager for Standard of Jersey, also had a talk on future oil supplies, of which highlights were:

Too Little or Too Much

"The prophesy that we are running out of oil is an old one. It is startling to a nation which has led the world in mass transportation and which has raised its standard of living to unprecedented levels, largely on the basis of a tremendous low-cost supply of liquid fuel derived from petroleum." Barrett pointed out that we also now have a group believing that we are going to have too much oil for our future needs. "The suspicion that we may have too much oil arose soon after the explosion of the first atomic bomb," he said, "and is based on the idea that the time is not far off when we will depend largely on atomic energy to drive our vehicles and power our industries.

"The great majority of students of atomic energy do not foresee the rapid substitution of atomic energy for pe-

(*Continued on page* 103)

Oil for Western Burners

Big Northwest Demand Will Create New Problems

By
A. E. Coburn

How are we going to supply 12,000,000 to 15,000,000 barrels of new heating oil demand in the Pacific Northwest within the next few years? That is the $64 question which is looking Pacific Coast oil men in the eye, and the most frequent answer is to deny that there is any great probability that such a demand will develop. If and when it does develop, they say, we'll take care of it—at a price. How, and at what price, are prime matters to the oilheating industry.

Field men, familiar with the details of the potential oilheating market in Oregon and Washington, are more likely to admit the possibility of tripling the present demand than home office men who know it only from hear-say. It is significant that no published forecast of future petroleum demand in 1950 shows heating oils higher than 1944. It is reasoned in the home office that the reduction in wartime heating will more than compensate for the new oilburner installations to be made, but the area is now at or near its wartime peak in population, and there is little probability that the wartime heating demand will show much decrease.

Many aspects of the Northwest market were covered in an article in the June issue. There is almost no effective competition for oil for the domestic heating load. Washington coal is of poor quality and high in price; gas is of fair quality, but high priced, and local sawdust is inconvenient and increasingly hard to get. People want to burn oil, the one domestic heating fuel that has none of these objections, and they are demanding burners in far greater numbers than the industry yet can supply.

There are now in Oregon and Washington about 800,000 one- and two-family houses, and building is progressing at a high rate. There are now 150,000 oilfired central heating installations in the two states. In view of the desire of homeowners for oil, the present degree of saturation, and the new building that is going on as fast as materials are available, a 200% increase in the number of burners operating by the end of 1950 seems entirely feasible.

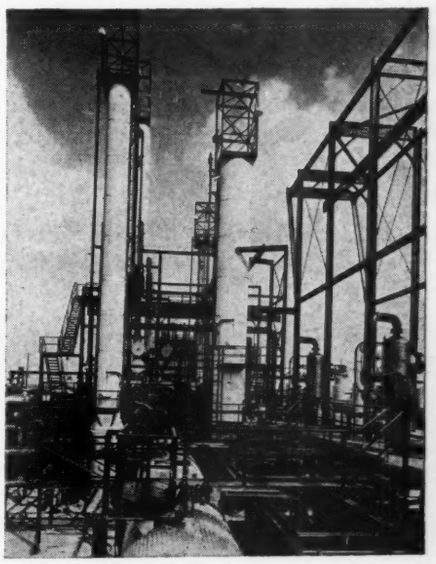
Private estimates of demand by major oil companies show a growing demand for heating oils in the five-state Pacific Coast marketing area, but these estimates do not reflect any such increase as some oilheating men expect. One of the largest majors marketing in the territory sees an increase of more than 46% in heating oils from 1945 to 1947, to about 60,000 barrels a day in 1947. During the same period Diesel oil for internal combustion engines is expected to increase in demand more than 76% to around 37,000 barrels a day. Total demand for all gas oils and Diesel oil is expected to increase 33.7% from 1945 to 1947, to reach 115,000 barrels a day. Crude run to stills, which averaged 931,000 b/d in 1945, is expected to decrease more than 15% to around 790,000 b/d in 1947.

Diesel Competition

Chief competitor of the oilburner for the middle of the barrel is the Diesel engine. Diesel use is increasing rapidly at present, and may be further accelerated in the near future, but as Diesel oil demand increases it replaces larger quantities of actual or potential gasoline and residual demand. At present there is a special Diesel oil appearing on the market in the Pacific area for internal combustion engines, and it is expected that the higher cetane rating demanded by Diesel engine users will push this product about 2 cents higher in price than the Pacific Specification 200 oil which is used for heating.

Unlike most oil engine users in the East and parts of the Middle West, who use kerosene and range oil in their Diesels, Far West users use a true Diesel oil and demand a product of 45 cetane or better. Cetane ratings are to diesel oil what octane ratings are to gasoline. The higher the cetane number the less smoke and the more power. Present demand probably will not make necessary a 50 cetane commercial diesel fuel, such as was demanded by the Navy for submarine use, but competition will tend to keep the ratings relatively high and increase them. A haze of smoke behind a fishing boat is far less disasterous than a trail of smoke behind a wartime submarine, but local ordinances covering highway and railroad smoke-making keep truck, bus and rail users of diesel powered equipment constantly demanding a better oil with an adequate cetane rating. PS 200 heating oil has a cetane of 35 to 37, and has to be treated with additives to improve its quality for most internal combustion engine use.

Cetane rating, though not an exact measure of the burning qualities of an oil for heating, is a rough measure of its probable quality for burning. It is possible, however, to burn low cetane fuel satisfactorily with proper burner adjustment, and high cetane fuels for burning will not be in demand at the higher price.



It has been pointed out that diesel oil demand for ships probably will not reach the prewar demand before 1950, due to the sinking of most of the Japanese and Scandinavian fleet which formerly bunkered on the Pacific Coast. Navy demand will continue high, and other uses are expected to increase. Private estimates indicate that bunkers, which took about 6,000 barrels per day of diesel oil in 1945, will

be demanding 17,000 b/d in 1947. Railroads, in the same period, will increase from 4,000 to 6,000 b/d, and manufacturing diesel demand will double to about 4,000 b/d. Miscellaneous uses, such as trucks, buses, construction machinery and similar diesel powered equipment, which took 9,000 b/d in 1945, will demand 10,000 b/d in 1947. It is expected that this two-year increase of more than 76% will continue to grow.

Gasoline demand, which is considerably below prewar levels in the East and Middlewest, is above 1941 in the Pacific States, and increasing every month. Almost every recent month has marked a new high in gasoline demand on the Pacific Coast, and the end is not in sight. Refiners are running all possible gasoline and still meet their commitments for other products, but one major oil company has cancelled future commitments on burning oils, and another has drastically reduced them.

A disturbing feature of the gasoline demand is the competition for higher quality product. Present demand is 54% for premium grades, and before the recent reduction in lead allocations, premium grades of gasoline were running as high as 85 octane. Few cars now on the road can make full use of such high quality fuel, but refiners continued as long as possible to improve the quality to satisfy the public clamor for better product. The effect on oilheating has been to make necessary a lower quality burning oil.

It is expected that PS 200 (No. 3) oil this coming winter will be about 25% catalytic cracked, blended with 75% straight run. Some burner adjustment may be necessary to handle this product satisfactorily, but there is little probability that burning oil quality will be higher in the future, so dealers and users may as well start now to put their equipment in condition to use the harder-to-burn distillate. PS 100 (Stove oil), which is used in space heaters and other vaporizing equipment, now sells in most markets at a cent above PS 200. Since this probably will continue to be largely a straight run product, there may have to be a wider price spread.

Early in the year burning oil prices were increased three-quarters of a cent on the Pacific Coast. It is probable that with ceilings removed prices of heating oils will increase again, but authorities do not agree on the amount. Estimates range all the way from another three-quarters to two cents a gallon. If a large increase in demand is to be met, it seems probable that some price increase will be necessary to make it attractive to refiners to supply it. Dealers, obviously, do not enthuse over such a prospect, and in some areas such an increase would have a disastrous effect on the market, but getting out the supply is largely a matter of not-too-difficult mathematics.

The present price spread at the refinery between gasoline and heating oils is 3¼ cents. It costs about 2 cents a gallon less to make heating oil than gasoline, so with a price increase of about 1¼ cents a gallon, heating oil volume would be as attractive, profit-wise, as gasoline. It probably will not be necessary in the immediate future to go all the way, but any appreciable narrowing of the present spread in price would make available larger quantities of oil for burning.

Another moderate increase in the price of heating oil probably would not materially affect the potential market in Oregon and Washington, but in the San Francisco Bay area, for instance, such an increase might make the price prohibitive. The larger cities of the Northwest have no satisfactory domestic fuel at present that can compete with oil, though every price increase would intensify the ever-present threat of gas and electricity competition. The San Francisco Bay area, however, pays around 40 cents a thousand feet for 1100 Btu natural gas, and any increase in oil price would be hard to take.

(In spite of a price advantage, towns in the Bay area have foisted unreasonable ordinance restrictions on oilburning to favor gas. In the town of Alameda, for instance, an oilburner cannot be connected to a terra cotta chimney, which is usual in that area, though all other fuels may use it. An oilfired heating plant must be totally enclosed in a fireproof room built around the furnace. Oil cannot be delivered from the curb. The truck must be driven entirely within the property line.)

In a free economy the law of supply and demand will tend to equalize the price differentials between the various fuels, and it seems reasonable to expect that some of oil's present advantage in the Northwest will be whittled away. No oilheating man will want to see that day come, but it seems probable that it may, and it is necessary that the market be supplied with needed equipment as fast as possible.

With a large, active demand for burning oils the refiners and marketers will find a way to supply it—at a price.

DEMAND FOR DIESEL AND OTHER DISTILLATE FUELS*

(Barrels Daily, Five Western States, Based on Bureau of Mines' Actuals)

Uses	*1937*	*1939*	*1941*	*1944*	*1947*	*1950*
Railroads	142	299	953	3,877	7,000	7.800
Vessels	25,723	22,090	11,216	7,822	12,000	13,000
Gas & Elec. Power Plants	1,033	600	896	525	600	600
Smelters, Mines & Mfg. Industry	759	1,162	2,014	2,257	2,100	2,400
Heating	9,008	13,266	20,389	36,628	29,000	32,000
U. S. Navy, Army & Coast Guard	395	2,145	3,083	14,003	4,500	3,600
Used by Oil Companies	129	255	334	284	400	400
Miscellaneous	14,164	9,312	10,962	12,432	10,000	13,000
TOTAL	51,353	49,129	49,847	77,828	65,600	72,800

DEMAND FOR RESIDUAL FUELS*

(Barrels Daily, Five Western States, Based on Bureau of Mines' Actuals)

Uses	*1937*	*1939*	*1941*	*1944*	*1947*	*1950*
Railroads	80,066	69,337	96,452	125,536	84,000	71,600
Vessels	53,085	49,192	38,222	69,186	37,000	37,000
Gas & Elec. Power Plants	9,882	6,293	9,447	17,243	15,000	13,000
Smelters, Mines & Mfg. Industry	31,416	26,296	32,019	41,814	30,000	33,000
Heating	16,047	12,600	15,145	21,314	20,200	23,500
U. S. Navy, Army & Coast Guard	15,384	15,485	33,247	117,098	50,000	50,000
Used by Oil Companies	11,060	23,293	23,849	27,615	20,500	20,000
Miscellaneous	15,008	4,907	6,679	3,891	6,500	8,000
TOTAL	231,948	207,403	255,060	423,697	263,200	256,100

*Tables from the paper "Outlook for California Oil," by R. L. Minckler, vice-president of General Petroleum Corp., Los Angeles, presented before Pacific Coast Division of American Petroleum Institute.

New England OHI Holds First Annual Oilheating Exposition

NEW ENGLAND oilheating men gathered at Boston in surprisingly large numbers every day of the week-long Annual Exposition of Oil Heat Institute of New England, June 24 to 28. In spite of sweltering weather which set seasonal high marks, each meeting was packed with attentive and interested audiences, and the exhibitors were kept busy for four days.

Dealers at the New England show, like those who filled the Philadelphia exposition two months earlier, were present in the hope that some manufacturer would accept an order for immediate shipment. The manufacturers, again, were anxious to talk to good potential dealers only in terms of future business. In spite of the lack of equipment, optimism prevailed and the feeling was abroad that things soon would be different.

Non-competitive listeners heard confidential stories of new sources of motors that soon would deliver in good volume, of an individual who had located some tanks, or of a supply of copper that was on the way. There were few definite guesses on the date of full production, but the conversation indicated that an easier supply situation might be expected well before the first of the year.

Local customers were invited to view the show on the first day, June 24, and they came in gratifying numbers to look at the equipment they hoped to buy. Since the show was held in the public rooms on the hotel mezzanine, there was some public attendance throughout the show.

A dinner on the evening of the first day was held as a testimonial to Fred N. Beckwith, executive secretary of OHI of New England, and recently resigned as secretary of the Massachusetts Oil Heating Association. Speakers recalled the long service "Uncle Fred" had given the industry, his devotion to the dealer throughout the war years, and his energy in promoting the best interests of the industry through the New England area and nationally. As a show of appreciation, he was presented with a new automobile to be delivered "as soon as possible," following which he returned to the many duties of managing a successful convention and show.

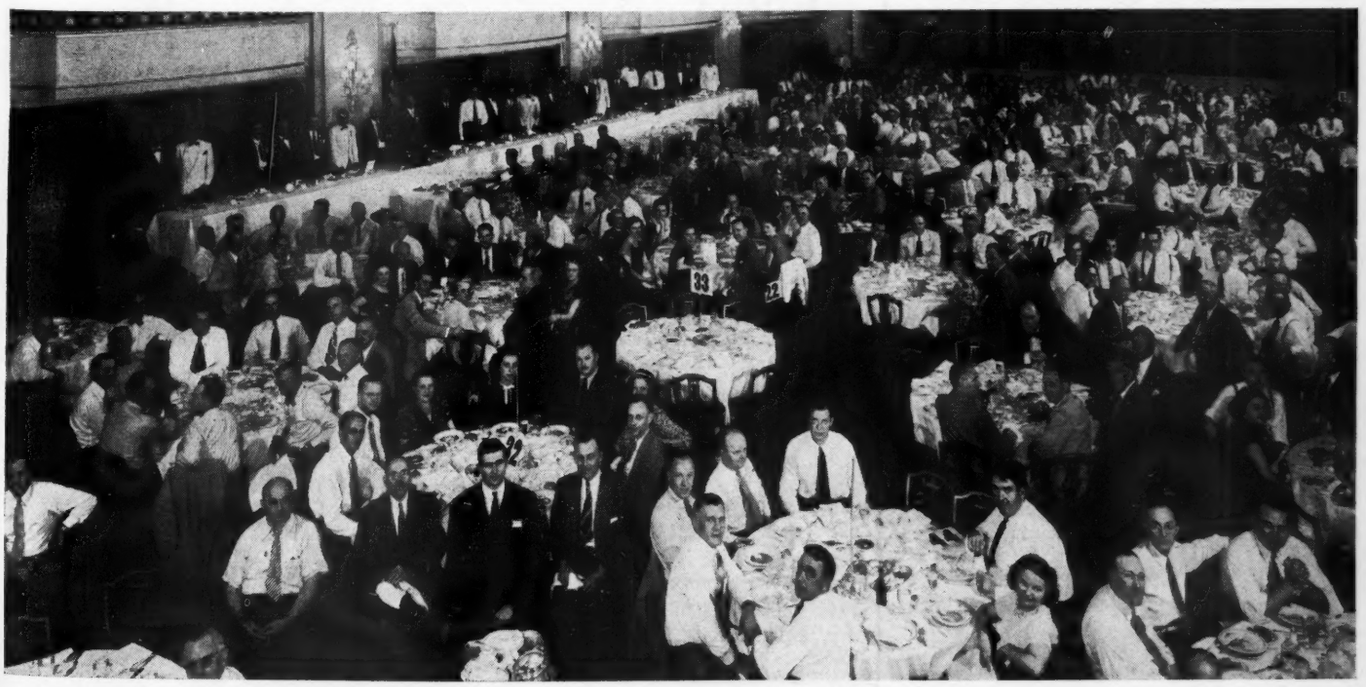
Three luncheon meetings during the week served as business sessions, and evening sessions following dinner were largely for entertainment. Temperatures in the middle 90s did not appear to slow attendance, but brought forth a varied array of shirt sleeves and colored suspenders.

Arthur H. (Red) Motley, former publisher of *American Magazine,* and now president of Parade Publications, followed the audience lead, stripped off his suit coat and held an audience of 300 on the edge of their chairs with the facts of life on the merchandising and selling job ahead of them. In his characteristic, easy-to-follow style, he warned against complacent and traditional habits in selling in the years ahead, and called for aggressive and daring tactics to move the volume of production the industry of the country would turn out.

"Our market has changed its buying habits in recent years," Mr. Motley warned. "You and I never used to run a car more than two years, but we have learned to keep it on the road for more than three times that long. Your customers have had to nurse a limping heating plant through another winter, and they have gotten out of the habit of buying new equipment the minute it seems desirable. They may need the new car or the new heating plant, but they won't buy it until somebody teaches them to want it. That is the function of selling, and only through aggressive selling can we move the volume of goods that will be required to keep our productive capacity occupied at a satisfactory level."

Mr. Motley pointed to recent surveys as indicative of the market that can be sold, but warned against accepting the survey results as a measure of the automatic demand for goods and services. "People buy what they want, not what they need."

(*Continued on page* 106)



Wiring for Modern Hot Water

Reverse-Acting Controls; Tank Controls; Adjustments

By
J. W. Schulz

ARTICLES ON THE DETAILS of planning and installing ultra-efficient year-round water heating installations, published recently in FUELOIL & OIL HEAT, caused readers to mail in many comments and questions. A good many dealers and service men seemingly knew little about the tank temperature control arrangement recommended in one of the articles. It cuts summer oil consumption in half, provides more hot water in summer from an indirect heater of any given size, and provides cleaner burning in summer by causing longer and less frequent burner runs.

Most of the questions had to do with wiring diagrams for new installations and old jobs which were to be renovated to cut oil consumption, provide additional hot water, and arrive at cleaner burning in summer. The accompanying wiring diagrams contain the answers to most of the questions which were received.

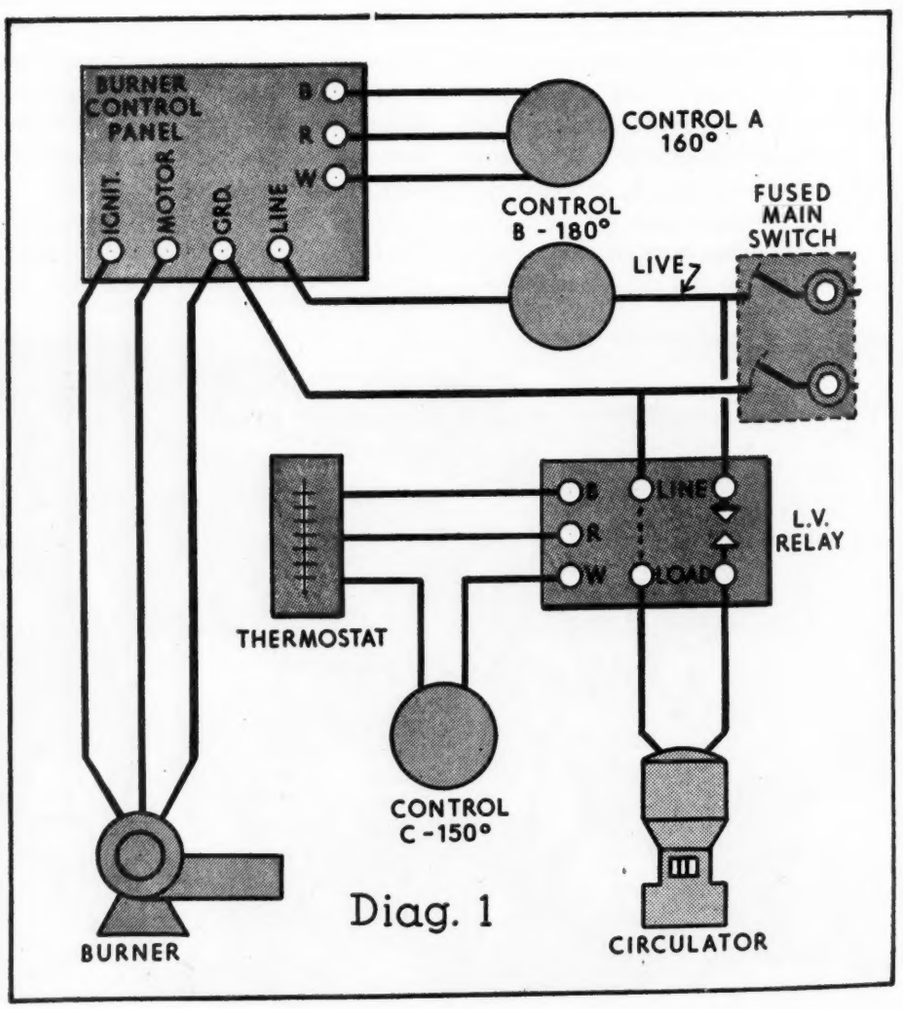
One reader of FUELOIL & OIL HEAT asked this interesting set of questions. (1) Which installations, having tanks but no tank temperature controls, need reverse-acting controls on the heating boilers? (2) What purpose does the reverse-acting control actually serve? (3) Which control settings should be used when a reverse-acting temperature control is used on the boiler? (4) Can the reverse-acting control be wired either low-voltage or 110-volt?

Diags. 1 and 2 provide most of the answers to these questions, and also to other questions about wiring temperature controls into low-voltage or 110-volt circuits.

Diag. 1 would be used by a dealer who prefers to have as much as possible of the wiring low-voltage on a forced-circulation hot water heating plant equipped with a tank-type indirect water heater, and reverse-acting boiler temperature control—but not equipped with the tank temperature control recommended in the earlier articles.

In Diag. 1, Control A is a boiler temperature control set at about 160° and used to start and stop the oilburner. Summer and winter, the boiler is kept at the temperature for which this control is set. To obtain cooler or hotter water in summer, for example, this control is set lower or higher. The control simply is wired to the thermostat circuit of the burner control panel, using low-voltage wiring, of course. Using Series 10 controls, three wires connect this control to the panel, as the diagram shows. For a two-terminal, snap-acting control, two wires would be run from the control to the panel whether the panel is a Series 10 type or other type.

Control B is the high limit control, installed to provide safety in case of trouble with the low-voltage control, low-voltage wiring, or control panel. That is, if for any reason Control A fails to stop the burner and therefore the boiler tends to overheat, Control B will stop the burner. Wired in the live leg to the burner panel, Control B (a 110-volt control and wired for 110-volts) serves to cut off the 110-volt current to the oilburner panel if and when the boiler should tend to overheat. To make certain that Control A usually controls the burner, keeping Control B inactive and in reserve for emergency, a serviceman should set Control B about 10° to 20° higher than Control A, then check these settings to make sure that Control A will stop the burner at the desired boiler temperature and Control B will open its switch at a somewhat higher boiler temperature. Don't make the mistake of setting Control A so high, compared to the setting of Control B, that Control B usually starts and stops the burner. Avoid

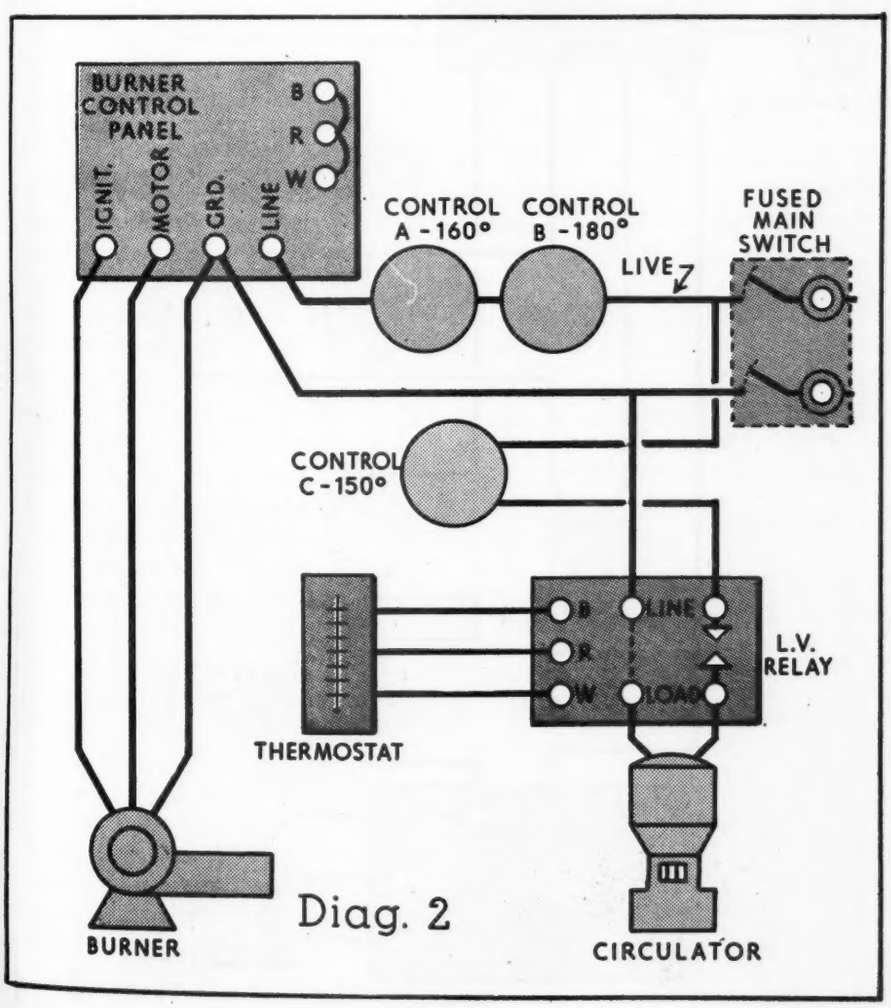


Diag. 1

also the error of setting Control B unreasonably high, at a temperature which causes the boiler water to boil.

According to Diag. 1, with Control C in its "on" position, the circulator simply is started and stopped by the room thermostat. With that in mind, the functions and adjustment of Control C can be understood better. Control C is the reverse-acting boiler temperature control which seems to be puzzling not only to newcomers in the oilheating industry but also to many men who have worked at installation and service for years. Control C opens its switch when cool, closes its switch when hot. This is opposite to the operation of the controls usually used for oilheating (since these stop burners on an increase in temperature or pressure) and causes this control to be termed "reverse-acting." Located fairly low on the boiler and where it will quickly detect chilling of the boiler caused by the circulator's rushing cool water from the radiators into the boiler, Control C has the function of keeping the circulator idle, when running the circulator would chill the boiler so much that the indirect water heater would fail to provide hot water.

If Control C were to be set too high, it would prevent the circulator from operating at all. That follows from this line of reasoning. Control C is in series with the room thermostat and must be in the "on" position to permit the circulator to operate; being reverse-acting, it closes its switch when the boiler temperature increases; if Control A stops the burner before Control C is heated sufficiently for its switch to close, then the circulator cannot operate at all. On the other hand, if Control C is set too low, it will not stop the circulator when running the circulator would chill the boiler so greatly as to cause cold water to come from the indirect water heater. This is one method of adjusting Control C. Operate the oilburner until Control A stops it. Note the reading given by the thermometer on the boiler; also, feel the boiler temperature about one-third the way from the bottom of the boiler if possible. Next, block open or adjust Control A or B to keep the burner idle, and start the circulator by raising the setting of the thermostat. The boiler temperature will start dropping in a few minutes because the circulator is running but the burner is being kept idle. When the boiler temperature starts dropping appreciably, say about ten to fifteen degrees as gauged by feeling the boiler again about one-third the way up and taking readings on the boiler thermometer, the reverse-acting control (Control C) should stop the circulator since if the circulator continued to operate the boiler would be chilled so greatly that no hot water would come from the indirect water heater.



Diag. 2

Which installations need this type of reverse-acting control? The answer to that question is simple, but without using cut-and-try methods it is difficult to apply the answer to actual installations. The answer is: A reverse-acting control of this type is needed where without this control the hot water storage tank chills at times, but with this control there is ample hot water. To play safe, certain dealers are installing a reverse-acting control on every one of their tank-equipped, forced-circulation hot water heating plants. These dealers never know where they "could have gotten by" without providing this control. They are heading off trouble which could be caused by failure to provide the control on installations which need it. Incidentally, the reverse-acting control must be installed and adjusted properly for forced-circulation plants equipped with tankless heaters; there's simply no getting around that because on these jobs the circulators must be prevented from chilling the boilers and the indirect tankless water heaters at any time when hot water may be needed. Setting the reverse-acting temperature control too low where there is a tank-type water heater often causes no difficulty because many tank-type jobs need no reverse-acting controls. But setting the reverse-acting control too low on a tankless heater installation is almost certain to cause complaints about the hot water running cool just after the circulator is turned on by the room thermostat.

Notice in Diag. 1 that only Control B is wired for 110-volts. For maximum safety, this control must be so wired. The room thermostat and Controls A and C, are wired low-voltage.

If you prefer to run low-voltage wiring for only the thermostat circuit, use the wiring shown in Diag. 2 to obtain the identical results given by the wiring in

Diag. 1. It is easy and inexpensive to mount two high limit controls side-by-side and wire them 110-volts and in series with each other, as Diag. 2 shows. Certain men find this easier and less expensive than the low-voltage arrangement for Control A which is shown in Diag. 1. With Controls A and B so connected, Control C can, of course, be wired either as shown in Diag. 1 (low-voltage) or as in Diag. 2 (110-volts). A dealer undecided about using Diag. 1 or Diag. 2 for his installations does well to wire a few sample jobs each way; usually he and his men then arrive automatically at a preference for one method or the other. Servicemen, especially those working for fueloil companies and men expected to know how to service all types of installations, should be familiar with both types of wiring, since in their everyday work they are likely to encounter great differences in the wiring of different installations and must be able to figure out the reasoning behind any wiring they find on a job which needs tuning or repairs. Installations never are tuned properly by happy accident; those which are in proper adjustment have been tuned by experts who knew the function of every control on the particular installations.

Diag. 3 may appear involved at first, but consider a jumper in place of Controls 4 and 5. With these controls removed from the circuit, you have a diagram published previously in FUELOIL & OIL HEAT, and the simplest wiring for a forced-circulation installation which has a tank-type indirect water heater, tank, and tank temperature control.

Considering Controls 4 and 5 eliminated (shunted by a jumper will do), here is the operation.

1. When heat is needed in winter, the thermostat circuit closes, causing the relay to snap in and close both sets of contacts shown in the diagram. The right-hand set of contacts starts the oilburner by giving 110-volts to the oilburner panel (notice the jumper on the thermostat terminals of this panel; consider the boiler temperature controls in the "on" position); and the lefthand set of contacts starts the circulator. Even though the boiler has not yet received considerable heat from the flame, the water starts circulating to the radiators. A mild, steady heat for mildly cold winter weather is the result of this characteristic of the layout, although indeed in actual practice the boiler never is stone cold in winter when the thermostat starts the circulator.

2. When the center of the hot water storage tank chills below 120°, the tank temperature control, which is Control 3 in the diagram, starts the oilburner by shunting the relay contacts in series with the live line to the burner panel.

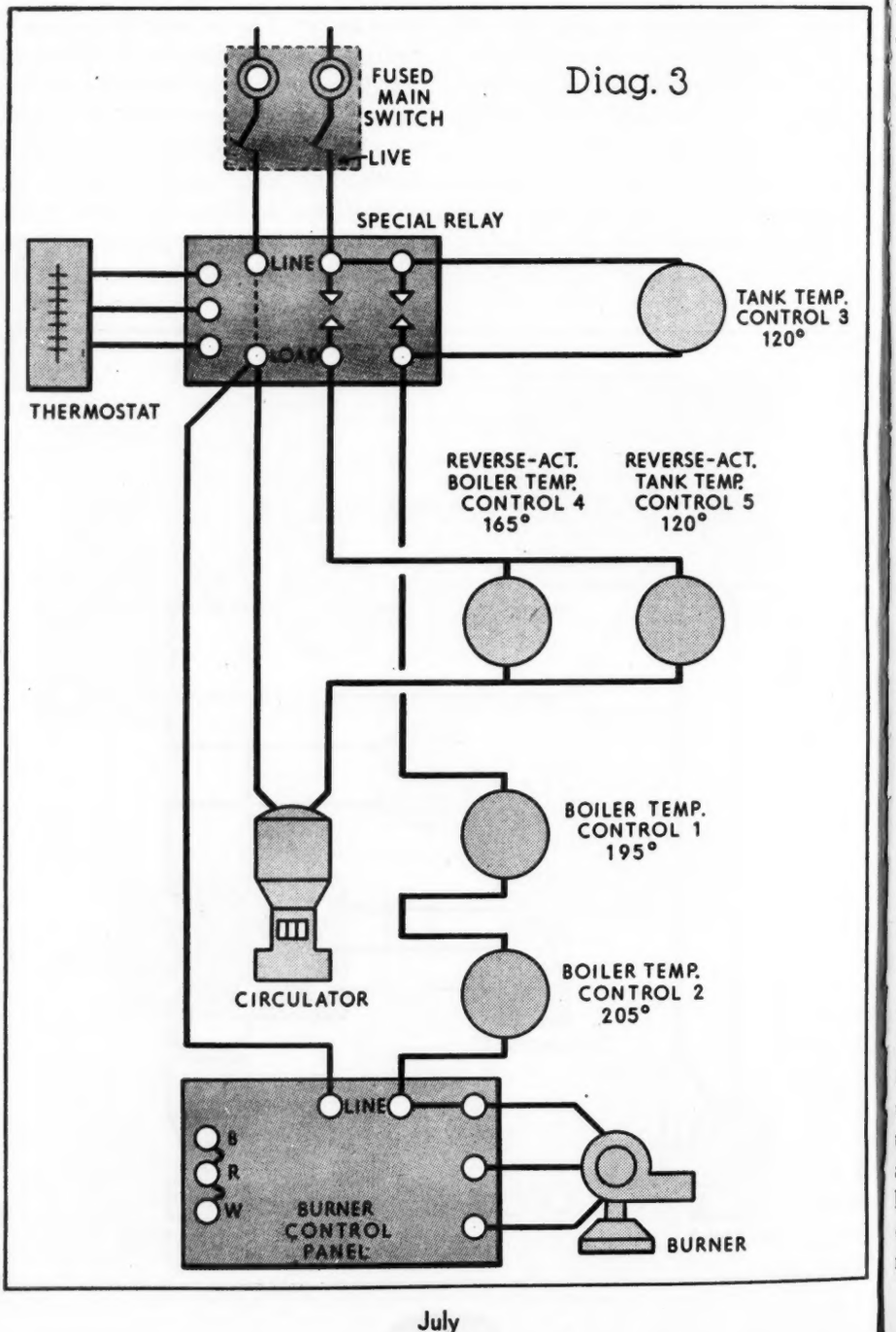
3. The heating boiler becomes cold when the tank is sufficiently heated and when no radiator heat is needed, because the burner operates only because the tank has chilled or the room thermostat circuit has closed. This saves fuel and eliminates short, unnecessary "on" periods which give incomplete combustion and waste oil.

4. Boiler temperature controls, that is Controls 1 and 2 in the diagram, are at all times in series with live line to the burner panel. Set relatively high, they give unusually high output in summer from an indirect water heater, but give this, of course, only when the tank needs heat.

These four points boil down to the room thermostat starting both the circulator and the burner; the tank temperature control starting only the burner; and the burner remaining idle otherwise.

Control 4 was mentioned in an earlier

(*Continued on page 98*)



Housing Approvals Mount; Oilheating in Third Place

FROM THE START of the new housing program, January 15, up to May 31 a total of 531,016 housing units received approval from FHA field offices and must begin actual construction within 90 days, after which their authorizations expire. 149,580 of these were rental units in apartment buildings and the like, a few were in Territories outside continental U. S. and 428,133 were actual homes to be built within this country, the group in which the oilheating industry is interested.

Considering that Housing Commissioner Wyatt has planned for starting 1,200,000 units this year, the goal can probably be reached, since 44% were applied for and authorized in the first 4½ months.

While a lot remains to be decided about heating in some of these homes, the advance picture would indicate that oilheating is running a rather weak third in fuel preferences. Civilian Production Administration men in Washington are now thinking that the present authorizations will stack up to about 20% fueloil, 30% coal and 50% gas. They are not too far wrong if the estimates of oilheating dealers, reporting for their own communities, are substantially correct (described in the "Oilheating Trends" section of this issue). The accompanying table shows an application of dealers' estimated fuel percentages to the number of homes authorized to May 31 in various areas of the country. In the South and the West (other than Pacific Northwest) too few dealers report to consider their experiences representative, so in the table the fuel percentages for those sections are estimated from the Census of 1940, adjusted somewhat by perception of trends.

The strong position of gas in this picture is due to several reasons, all relatively well recognized. Homes are small, with low heat loss as a result of full insulation; gas equipment is decidedly cheaper to install than oil, around $150 to $200 a house cheaper. This is important in holding down the house cost inasmuch as everyone recognizes that returned service men cannot buy homes that cost too much; conversion gas burners are more readily available at present, since they are not hamstrung by shortages of motors, transformers, pumps, etc.,—they have none of these things to worry about. Also, gas makes a strong showing for geographic reasons. Not many homes are being started in the areas where oilheating is strongest, the New England and Middle Atlantic areas. The table shows a comparison of present home building activity with prewar activity as reported by FHA.

To date, the program is not working out as planned in the ratio of low-cost to high-cost homes. The intent was to keep two-thirds of them under $6,500; actually only one-third are in that low price range to date. Perhaps the ratios will improve as the program reaches proportions of mass production. On the theory that no man can afford a home that costs more than double a year's income, the present pattern won't be too effective for GI's, since certainly two-thirds of them don't earn upward of $3,250 a year. The table shows a breakdown by sale prices.

To streamline the progress of the housing program, a number of steps have been taken by either the Civilian Production Administration or the National Housing Agency since the last issue. Briefly, these were:

Ordered CPA field offices on May 30 to reduce the dollar value of its non-housing authorizations two-thirds for the ensuing 45 days in an attempt to bring authorizations nearer to the reality of material availability.

NHA announced June 4 minimum standards to protect the veteran in the kind of home he buys. These are to be known as "HH Minimum Property Requirements" and cover space, arrangement and construction of the home. Standards will be announced and policed by FHA field offices.

CPA on June 5 added extended surface convector radiation to the list of critical products in Schedule 1 of Priorities Regulation 28, requiring 70% to be set aside for veteran's housing. Other items recently added to the list include warm air furnaces, malleable and grey iron castings, cast iron radiation, fractional horsepower motors and electrical sheet steel.

Brought under Government control on June 6 was the output of every sawmill in the country, where previously CPA

(Continued on page 102)

Prewar Building vs. Present Activity

Per cent of Total by Regions

	Residence Permits 1935-39	*Authorizations 1/15/46-5/31/46*
New England	2.5%	3.3%
Middle Atlantic	43.9	13.4
E. North Central	8.8	17.5
W. North Central	2.0	6.9
South Atlantic	10.8	14.3
E. South Central	2.2	7.0
W. South Central	8.4	12.2
Mountain	1.4	5.1
Pacific	20.0	20.3
Total Per Cent	100.0	100.0

Housing Authorizations to May 31 by Indicated Fuels

(Number of Dwelling Units for Sale)

	Oil	*%*	*Gas*	*%*	*Coal*	*%*
New England	11,337	81	1,400	10	1,259	9
Middle Atlantic	26,457	46	22,431	39	8,628	15
Midwest	10,420	10	60,436	58	33,344	32
The South	40,076	28	45,801	32	57,251	40
Pacific Northwest	7,173	35	1,025	5	12,295	60
Balance of West	17,760	20	48,840	55	22,200	25
U. S. Total	113,223	26	179,933	42	134,977	32

Dwelling Units Authorized to May 31 by Price Groups

	Total	*$4,499 or Less*	*$4,500 to 5,499*	*$5,500 to 6,499*	*$6,500 to 7,499*	*$7,500 to 8,499*	*$8,500 to 9,499*	*$9,500 to 10,000*	*$10,001 or More*
New England	13,966	595	787	1,121	2,342	3,325	3,125	2,463	238
Middle Atlantic	57,516	1,444	1,362	2,812	6,037	12,440	11,636	19,239	2,546
E. North Central	74,906	6,501	4,989	7,807	14,965	14,435	12,517	12,571	1,121
W. North Central	29,294	4,477	2,654	4,635	5,942	4,967	3,808	2,544	267
South Atlantic	60,921	12,769	7,864	8,672	7,699	8,047	6,849	8,215	806
E. South Central	29,928	10,673	4,503	4,931	3,211	3,023	1,817	1,609	161
W. South Central	52,279	13,641	7,687	8,994	8,785	5,566	3,724	3,662	220
Mountain	22,109	3,991	2,286	4,505	4,259	3,617	1,704	1,602	145
Pacific	87,184	5,690	5,259	8,838	13,104	16,363	18,064	18,285	1,581
TOTAL	428,133	59,781	37,391	52,315	66,344	71,783	63,244	70,190	7,085
Per Cent	100	14	9	12	15	17	15	16	2

Modern Dealer Accounting

Part II. The Whys and Hows of Knowing Where You Stand

By
Lionel L. Jacobs

IN OUR LAST ARTICLE we discussed the Balance Sheet and the information to be obtained from it, by the operator of a business. Next, in our survey comes the Operating Statement.

The purpose of this statement is to summarize and group the operations so that all related entries come together under their proper groups in predetermined items to allow the income and direct expense or cost of sales and the gross profit or loss to be readily seen.

Figure 4 is a typical Operating Statement. It will be noted that this statement is in two parts. On the left side appear the figures of the current month's operations and at the right the accumulated figures for the year to date (fiscal or calendar as the case may be—in this case a fiscal year).

The importance of this statement lies in the ease with which it is possible to spot unusual conditions and to determine good or bad trends.

In a business that has for several years maintained the same pattern for its accounting records, ratios gradually develop that are most helpful in informing the operator as to the correctness, or perhaps better to say the profitableness of his operations and the division that needs correction, if any.

These ratios are seldom closely comparable even in any two businesses of the same type and not at all comparable between different businesses, thus it is readily understood that in the heating business and in most businesses having an installation function, the labor is much higher and cost of materials lower than in, say, the sale of electrical appliances. Likewise, in divisions of the same business considerable variation occurs. It is not hard, therefore, to appreciate the difficulty of establishing any general ratios and consequently how important it is for any business to develop its own yardsticks.

Examining the statement Figure 4, we note that the first column of the Accumulated Totals is a series of percentages which added to the percentage of the gross profit or loss in the fourth column, equal 100% of the division sales income.

Figure 4

Operating Statement
December 31, 1945

	DECEMBER				ACCUMULATED JUNE 1, 1945—DECEMBER 31, 1945			
SALES—MISCELLANEOUS HEATING EQUIPMENT		$21,876.34					$120,937.04	
Cost of Sales								
Labor	$ 2,483.74				$14.45	$17,520.78		
Material	10,214.00				46.14	56,162.50		
Commission	3,228.42				14.81	17,947.52		
Overhead	4,463.22	21,389.38	$ 486.96		17.22	20,825.56	112,456.38	$ 8,480.68
							2,347.13	
SALES—MISC. HEAT. EQUIP. SUBCONTRACTORS								
Cost of Sales								
Sub-Contractors Charges					73.03	1,714.35		
Commission					10.48	246.44	1,960.79	386.34
							7,898.48	
SALES—INSULATION								
Cost of Sales								
Labor					24.09	1,903.14		
Material					33.12	2,615.68		
Commission					22.18	1,751.82		
Overhead	195.30	195.30	**195.30***		43.60	3,444.29	9,714.93	**1,816.45***
							30,070.00	
SALES—INSUL-MASTIC								
Cost of Sales								
Labor					23.92	7,192.10		
Material					20.39	6,192.05		
Commission					14.30	4,300.28		
Overhead	472.53	472.53	**472.53***		33.83	10,173.15	27,857.58	2,212.42
		46,986.32					95,370.41	
SALES—FUEL OIL								
Cost of Sales								
Fuel Oil Delivered	42,438.68				90.47	86,285.83		
Commission	807.69				1.36	1,295.72		
Overhead	149.20	43,395.57	3,590.75		.92	881.12	88,462.67	6,907.74
			3,409.88					16,170.73
OTHER INCOME								
Discounts on Purchases			135.06	$3,544.94				516.56 $16,687.29
ADMINISTRATIVE AND GENERAL EXPENSE								
Overhead			3,220.13					18,658.16
Interest Paid			13.84					258.96
Reserve for Bad Debts			75.00	3,308.97				525.00 19,442.12
NET PROFIT AND/OR LOSS				235.97				**2,754.83***

*Loss

Most dealer businesses have several separate operations and it is important to charge to each operation all of the expense that it incurs, and so we determine that every item of expense that can be, must be charged directly to the operation concerned. The items charged to Administrative and General Expense being those that could be allocated only by a doubtful system of proportioning.

Even the simplest business with one operation can not afford to lump all its expense other than direct labor and material into one account if its operator wishes to know such things as—

(1) the rent he can afford
(2) the amount of personnel warranted by the income
(3) the amount he can spend for promotion and advertising, and so forth

No percentage figures are shown for the current month as it is seldom possible to include in any one month only those figures belonging to that month.

The first division of the statement is *Sales of Miscellaneous Heating Equipment*—The gross profit is approximately 7%. It should be around 12%, so we look at the expense ratios. Labor is running over 14%, whereas it should be around 12%. This needs further looking into to determine the cause (it will be referred to later). The cost of materials is steadily rising. Commissions, however, are down from about 17% average, explained by the fact that at August 25th when restrictions were removed only a few salesmen were employed and numerous "house" sales were made in the early days after V.E. Day.

Direct overhead is up almost 5%. This direct overhead includes many items that go up or down, depending on sales volume, however, the increase clearly indicates lack of sufficient sales and whatever our analysis of labor costs may show here is the specific reason for the lower gross profit.

Overhead is the bane of the operators existence. It would seem that only when everyone is taxed to the limit and many people yelling about being overworked is the ratio anywhere near what it should be. It needs careful watching and for this reason an *Overhead Statement* is made up monthly as shown in Figure 5 from which, by comparison with other months, it is possible to spot the items that are increasing and determine on a policy. It should be noted that while all unnecessary expense items should be eliminated, much more can be done in reducing the ratio of overhead to sales by increasing sales than by cutting expenses.

Returning to Figure 4, the next division is a sub-division of the first. *Sales of Miscellaneous Heating Equipment—Subcontractors.* Complete jobs subcontracted and carrying no direct overhead would throw our ratios out, if not separated.

The division, *Sales—Insulation* is interesting. The percentages of all items but direct overhead and gross profit are pretty well in line. The trouble here is manifestly lack of sales. The facts are that with the overwhelming interest developing in heating after V.E. Day, salesmen could not be induced to give sufficient effort to Insulation sales, a decision had to be made whether to put on a separate sales force selling Insulation exclusively, or close down the operation. The latter course was decided on and some items of prepaid expense are being written off as provided for at the time the expense occurred.

Figure 5

Overhead Statement

December, 1945

	Acc. Total	Monthly Total	ADMINIS. & GENERAL Acc. Total	ADMINIS. & GENERAL Dec. 1945	MISC. HEATING EQUIP. Acc. Total	MISC. HEATING EQUIP. Dec. 1945	INSULATION Acc. Total	INSULATION Dec. 1945	INSUL-MASTIC Acc. Total	INSUL-MASTIC Dec. 1945	FUEL OIL Acc. Total	FUEL OIL Dec. 1945
Advertising	$ 246.40								$ 246.40			
Automobile Repairs	229.76	$ 106.25	$ 131.91	$ 22.85	$ 28.97	$ 83.40			68.88			
Bad Debts Recovered												
Bank Service Charge	85.01	16.50	85.01	16.50								
Car Allowance	844.34	146.00	38.50	5.00	756.34	141.00	$ 49.50					
Credit Reports	344.92	32.85	344.92	32.85								
Depr. of Automobiles	53.34	7.62			53.34	7.62						
Depr. of Furn. Fixt., Equip.	567.00	81.00	105.00	15.00			105.00	$ 15.00	357.00	$ 51.00		
Employee Account	434.22	289.05	434.22	289.05								
Gasoline and Oil	996.95	168.25	365.27	73.05	451.16	95.20	42.34		138.18			
Hauling Trash	298.00	28.00	66.00	6.00	232.00	22.00						
Heat	132.27	67.34	49.92	33.67	49.90	33.67	16.23		16.22			
Insurance	1,486.02	260.44	396.25	65.93	588.60	163.21	147.95	13.35	353.22	17.95		
Legal and Accounting	125.75	17.00	125.75	17.00								
Light	302.69	50.75	75.68	12.68	75.67	12.69	75.67	12.69	75.67	12.69		
Maintenance Fix. & Equip.	1,184.56	101.98	478.47	43.24			95.45		610.64	58.74		
Memberships, Dues, Subs.	555.32	45.25	555.32	45.25								
Office Supplies	280.47	69.70	280.47	69.70								
Out of Town Expense	1,869.15								1,869.15			
Permits	607.83	126.00			607.83	126.00						
Postage	712.72	44.57	267.10	14.57	189.54	15.00	64.54		74.54		$117.00	$ 15.00
Rent	2,850.00	395.00	593.75	76.25	751.25	106.25	743.75	106.25	761.25	106.25		
Rental—Equipment	292.52	11.98							292.52	11.98		
Rental—Trucks	5,606.30	757.45			3,558.55	630.99	468.02		1,579.73	126.46		
Salaries—Management	6,944.56	1,071.99	6,944.56	1,071.99								
Salaries—Office	5,559.39	785.41	5,559.39	785.99								
Sales Promotion	863.44	80.53			31.40		282.43		18.00		531.61	80.53
Service Reserve	5,230.90	840.00			4,426.00	840.00	204.00		600.90			
Small Tools	1,517.31	133.63			1,016.65	133.63	317.61		183.05			
Stationery & Printing	944.02	267.31	396.60	35.25	531.17	232.06			16.25			
Sundries	321.00	320.50	321.00	320.50								
Suppers, Carfares & Park.	684.50	139.90	34.95	8.40	586.25	131.50	48.00		15.30			
Taxes—Social Security	695.74	116.93	144.22	23.69	383.22	86.66	33.88	.55	134.42	6.03		
Taxes—Unemployment	828.64	152.00	171.14	30.79	467.14	112.66	31.04	.71	159.32	7.84		
Telephone	1,420.17	275.86	373.25	80.51	421.13	114.84	179.82		213.46	26.84	232.51	53.67
Training Expense	5.75				5.75							
Traveling	1,781.76	25.00	319.51	25.00					1,462.25			
Vacation Allowance												
Wages—Lost Time	584.33	42.61			142.09	42.61	137.98		304.26			
Wages—Repairs	1,519.96	549.38			1,519.96	549.38						
Wages—Stockroom	3,768.60	609.68			2,787.58	516.18	401.08	46.75	579.94	46.75		
Wages—Surveys	1,206.67	266.67			1,164.07	266.67			42.60			
	$53,982.28	$8,500.38	$18,658.16	$3,220.13	$20,825.56	$4,463.22	$3,444.29	$195.30	$10,173.15	$472.53	$881.12	$149.20

Figure 6 **Consolidated Operating Statement**

December, 1945

	December		*Accumulated*	
SALES AND OTHER INCOME				
Miscellaneous Heating Equipment	$21,876.34		$120,937.04	
Misc. Heat. Equip. Subcontractors			2,347.13	
Insulation			7,898.48	
Insul-Mastic			30,070.00	
Fuel Oil	46,986.32		95,370.41	
Discount on Purchases	135.06		516.56	
	$68,997.72	100.00	$257,139.62	100.00
DIRECT EXPENSE				
Miscellaneous Heating Equipment	$21,389.38	97.77	$112,456.36	92.99
Misc. Heat. Equip. Subcontractors			1,960.79	83.55
Insulation	195.30	195.30	9,714.93	123.00
Insul-Mastic	472.53	472.53	27,857.58	92.64
Fuel Oil	43,395.57	92.36	88,462.67	92.76
	$65,452.78	94.86	$240,452.33	93.51
ADMINISTRATIVE AND GENERAL EXPENSE				
Overhead	$ 3,220.13		$ 18,658.16	
Interest Paid	13.84		258.96	
Reserve for Bad Debts	75.00		525.00	
	$ 3,308.97	4.80	$ 19,442.12	7.56
TOTAL TRANSFERRED	235.97	.34	**2,754.83***	**1.07***

*Loss

Sales—Insul-Mastic—The accumulated figures show that the division is producing an average gross and helping to carry a substantial part of the overhead. Being seasonal and no outside work being done in December or January the current month's figures show a small loss, again consisting of the amortization of prepaid expense.

Sales—Fuel Oil—This item needs no comment, the figures speak for themselves.

The items, Discounts (under other income) and Interest (under A. & G. Expense) show that minor borrowings from the bank are profitable when used to take cash discounts. In a reasonable business there are times of inventory accumulation that pull down cash reserves and then the bank plays an important part.

Administrative and General Expense—Herein is the overhead that could not be allocated. The figures are contained in the Overhead Statement, Figure 5, and any item can be examined in detail as may seem advisable.

In this period A. & G. Expense is running around 7½% against an average between 5% and 6% and this, with steadily rising costs and sales restricted by lack of product, is not surprising.

To obtain a broad overall picture of the business a *Consolidated Operating Statement* is most helpful, figure 6 shows the consolidation of the Operating Statement figure 4.

Here we see at once that most divisions of the business are yielding about 8% gross (with 12% as a target), that Insulation needs action, and above all, that profit can only come with more sales.

It is about what could be expected of a business moving out for expanded operations after being under wraps for several years.

At this point the operator must feel reasonably sure of his ability to expand or proceed to cut his expense to meet his income.

In our final article we will give some thought to books of original entry, and to certain records that help to keep us posted on how things are going.

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Canadian Priorities Given Oilburner Manufacturers

CRITICAL CONDITIONS in the coal supply situation in Canada have thrown the onus for supplying heat to Canadian households next winter largely on the oilheating industry. Shortages are due to the U. S. coal strike, followed by the short-lived rail strike, and capped by a strike of seamen which tied up practically all coal-carrying vessels on the Great Lakes. So grave is the fuel outlook that the Hon. C. D. Howe, Minister of Reconstruction, has warned: "I think anyone who interjects any note of optimism into the present fuel situation is misleading the people."

Emphasizing the need for switching as many households as possible to oilheating, Mr. Howe said steps have been taken to increase fueloil supplies, and some progress has been made. At most, he said, this fueloil would be equal to no more than one to two million tons of coal.

The Reconstruction Department is giving steel priorities to oilburner manufacturers, hoping that enough equipment will be made this summer to provide for the use of oil equivalent to 600,000 tons of coal. They are shooting for 60,000 oilburners, and every effort is being made to get that much oilburner production.

It is estimated that this burner production will require 20,000 tons of steel plate (estimate evidently includes tank) and as none has been imported recently from the U. S., this will mean the entire output of the Hamilton, Ont., steel mills for six weeks, at a time when Canadian steel tonnage has been cut back in other mills. Tank installation has been limited to one of 250-gal. capacity in any home where annual oil consumption is 2,000 gals. of fueloil or less.

Canadian householders are turning to oilheating, and becoming alarmed at the pessimistic fuel outlook painted by public officials. Mr. Howe recently issued an order limiting dealer and consumer to a delivery of no more than 60% of his normal requirements of the preferred classes of coal, defined as Class A fuel. The consumer may accept an additional 20% of his normal requirements in other coals. It has been indicated that fueloil price ceilings may be raised to encourage production.

Oilburner sales have increased in Canada far beyond the visible supply. Most burners now available are imported from the U. S. as parts and assembled in Canada, but a number of American manufacturers are reported to be opening branches in the Dominion to provide additional manufacturing facilities. A number of Canadian manufacturers also have started producing burners in recent months, but they are dependent mostly on U. S. manufacturers of parts and accessories, and are limited by the same shortages that are hampering U. S. production.

The feeling is held in many Canadian quarters that the overall fuel situation will be greatly eased when full scale coal production has been resumed in U. S. mines.

◈

William T. Gunn, Yonkers, N. Y., who is employed by the Texas Company, has been named a director of the Division of Refining of the American Petroleum Institute, succeeding *Dr. R. P. Anderson,* resigned.

HERE'S THE WAY TO SELL IT AT A PROFIT

DETROIT FLOAT VALVE EQUIPPED UNITS

Homes, new and old—stores—small churches—small meeting halls—all are in the market for oil heat in the smaller package units. Oil heat is clean and reliable—and at the same time economical. It *sells.*

"Detroit" Float Valve equipped space heaters, furnaces, ranges, and water heaters are the package units which meet needs of the big mass market. They are moderate in first cost—economical to use.

"Detroit" Valves have stood high in industry favor for 20 years. They are simple, extremely reliable—long lasting. Servicing is confined to an easy cleaning and adjusting operation.

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fuel oil / oil heat

Psychology Helps Business

More and More Companies Test Applicants Before Hiring

By
William S. Maulsby*

YOU ARE THE EMPLOYER. Several persons are applying to you the same day for a job. Two vacancies exist. It makes no difference whether the job is stenographer, lathe hand, salesman, or what. You have a number of applicants, and you employ two of them on the same day. The two you employ have the kind of experience the job calls for. They come from the right side of the railroad tracks. They look you in the eye the right way. Their voices are all right. They have good references. A doctor tells you they are in good health. They both look fine. You employ both of them.

Six months later, one of them is not working for you any more. Maybe instead of six months, it is three months. Maybe it is a year. But what happened was that of the two applicants that looked right to you only one of them actually was right. One of them could do the job and liked to do it. The other one was unfitted for the job, and everyone concerned knew it within a few months—or perhaps a year. You made some money on the one who made good. You lost on the one who did not make good.

Is this an isolated instance? Not for most businesses. In fact, for many businesses, the error is in saying one out of two new employees makes good. For many firms, one out of three or four, or even more, would be more nearly right.

What is the reason employers seem to have "bad luck" in selecting employees?

To answer a question of this sort, we had better go back to the beginning. What are the requirements for success in a job—whether the job is stenographer, lathe hand, salesman, or something else? That is easy: The successful employee must fit the job.

This is an important point. When you tell a new employee, "This job is whatever you want to make it," that is not quite right. The job is not likely to change—no matter what the employee wants. If the employee does not fit the job, there is almost no chance whatever to make the job fit the employee. It is true that, if an employee does fit a job, the employee may be able to do the job so well that the sky is the limit to the height of the stack of dollars he is paid twice a month. But, if the employee does not fit the job, there is only one practical answer: Let's get another employee. We can't change the job.

Now, the requirements for any job—the traits that must be possessed by the successful employee—can be considered as coming under three heads: Background, outer, and inner. Background traits cover such points as education, experience, and other biographical data. The prospective employer can learn the truth about significant background items in an interview or two, and from information the applicant gives or an application form.

Surface Appearances

Outer traits are as easily ascertained. As soon as the applicant steps in the room—or within a few minutes thereafter—the employer knows what he looks like, how he talks, how he shakes hands, and other similar physical details.

Do you often hear of an applicant failing to make good because he turned out to be not so tall as he looked when he was interviewed, or because a pleasant voice during an interview turned out to be an unpleasant voice after he began work?

It is not usually a misfit in outer qualities or background qualities that makes for non-success in a job. The failures, almost without exception, come because the new employee does not have the inner traits necessary for success. The employer may think he has checked these inner traits, or it may be that it does not occur to him that certain inner traits are needed in his job. But, whatever the reason, if you will review the history of unsuccessful employees that you have known, you are almost sure to find that they failed because they lacked certain necessary inner traits.

Many of these inner traits are measurable by standard psychological tests. And that is where psychology can help business—by measuring inner traits before an applicant is a new employee.

Most business firms, before they are willing to use psychological tests on applicants, insist on trying them first on some of their presently-employed personnel. They feel that if the tests can disclose the inner qualities of individuals they know well, the tests can probably be equally successful on applicants. When you learn, then, that some business firm is using psychological aptitude tests on applicants for jobs, you can be reasonably sure that the same firm has "tested the tests" and has found them reasonably accurate.

Measure Four Traits

Psychological tests measure four kinds of inner traits: Interests, Aptitudes, Personality Traits, and Mental Ability.

Anyone who stops to think for only a moment knows that an individual is unlikely to be successful at any job in which he is not genuinely interested. But, even without thinking, anyone knows that no applicant is going to admit he is not interested in the job for which he is applying. The psychologists, however, have tests to discover real interests—major success interests, they call them. A typical test of this sort asks several hundred questions about whether you like to swim, to dance, to go to the movies, to read books; whether you like fat people, thin ones, tall ones, short ones; whether you would rather be the motorman or the conductor, the engineer or the fireman; which subjects you liked in school, which ones you disliked; and many other questions that do not seem to have any particular bearing on the job that is under discussion.

But those same questions have been asked hundreds of persons who are engaged in the job in which you are interested. The pattern of their answers is known. If an applicant follows the same pattern, there is at least a strong indication that he will like the same job these other persons like. When answers on this

*Assistant Director, The Klein Institute for Aptitude Testing, Inc., New York.

Two Important Considerations

FOR THE PROSPECTIVE OIL BURNER DEALER

THE prospective oil burner dealer, who is debating which line of oil heating equipment he should handle during the coming years, will do well to consider these two important questions:

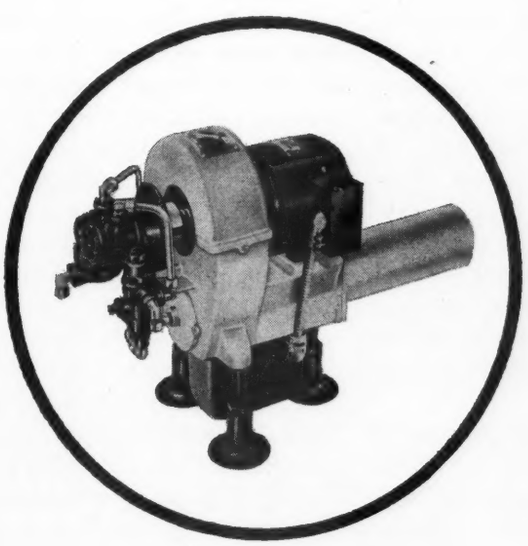
First, will the line under consideration prove acceptable to the public?

Second, will it prove profitable to the dealer himself?

Silent Glow products enjoy nation-wide public acceptance because they are recognized as being unsurpassed for purposes of heating, cooking, or processing. For more than twenty-three years, both in war and peace, the name Silent Glow has been a watchword of fine workmanship, dependability, and progress in the oil heating field. This established acceptance and confidence make it easy to sell Silent Glow.

And, the 1,600 oil burner dealers, who already hold Silent Glow franchises, know from experience that—when they sell a Silent Glow burner—their profit will not be wiped out by costly and time-consuming service calls and repairs. The many designs and features incorporated in Silent Glow burners not only eliminate the need for frequent servicing but, whenever such work *is* necessary, they aid in doing the job quickly and inexpensively.

If you would like to learn more about Silent Glow products and the franchise system under which they are distributed, let us hear from you without delay.



The SILENT GLOW
OIL BURNER CORPORATION
Hartford, Connecticut

test are integrated with answers to questions on other tests, the psychologist is quite sure that he knows the real interests of the person he is testing.

Aptitudes can be tested, too—even aptitudes seemingly as difficult to measure as sales sense. One test of this sort poses a number of sales situations—few of which would have been encountered in real life by any applicant. Individuals with good sales sense "guess" more right answers than do the ones without good sales sense.

By the way, any standard psychological test not only is checked beforehand on persons who are known to possess the qualities it is designed to measure; but the tests, in addition, are checked on beginners. That is, the future records of hundreds of inexperienced persons who took the tests have been observed. Students in medical school, for example, show by their continuance in their profession that the scores they made on tests they took in school were valid scores.

Problems of Adversity

The personality traits measured by psychological tests include significant characteristics an employer would like to know. For a salesman, for instance, the tests measure whether he can "take" the turndowns that are bound to come much more frequently than the orders. They measure his dominance, his aggressiveness, his self-reliance, his sense of humor. They measure whether or not he is trainable.

Mental ability tests measure speed, accuracy, and capacity of thinking—factors that for some positions made a good deal of difference.

Curiously enough, it is not the psychologists who make the most extravagant claims for what psychological tests can do to help business. It is the businessmen themselves. If sufficiently pressed to say something specific, psychologists might say, "The use of tests to supplement your own judgment should improve your ability to select the right man the first time."

Most of the business users of aptitude testing, however, have not this scholarly caution. Some of them tell their favorite consultant that his psychologists have been right in such proportions as 53 times out of 55, or 26 out of 28. Many of them quote a figure near 70%.

One of the wisest of them, however, puts it this way: "If aptitude testing improves our operation by even 5%, that is quite satisfactory."

Psychological testing procedures are helpful to business not only in employing applicants but also in upgrading presently employed personnel. Who are the right men to promote to foreman? Which girls should be made supervisors? Which salesman should be the next branch manager? Which department head can do the work of a vice president?

Psychological procedures can find out the answers to questions like these—not always, of course; but more times than the right answers would appear under ordinary methods.

The point about promotions is that the new job calls for some qualities that were not needed at all in the present job, or that were needed to a much lesser degree. Take sales sense, for example. A salesman needs some sales sense; but he can be a star salesman and still not have as much sales sense as is necessary for a sales manager. The sales manager—even if he has only two or three salesmen under him—has to have enough sales sense to enable him to help even star salesmen solve their sales problems. On the other hand, the sales manager does not need to be so interested in his own personal selling as is the salesman. After all, the sales manager does other things. If he is too much interested in his own personal selling, he is likely to spend too much of his time in personal selling instead of spending it to develop his sales force.

Measure All Values

The report made by the testing organization to the employer describes the strong points and the weak points of the individual who has been tested. If the individual is an applicant for a position, these strengths and weaknesses are measured against the requirements of the job for which he is being considered. If the person tested is already on the staff of the employer, the strengths and weaknesses are evaluated with respect to the kind of work for which the individual seems best fitted. Both kinds of reports are full of clues for handling the individual to make best use of his potentials.

A fairly complete list of the sorts of services a business firm could get from a consulting organization that specializes in psychological tests and related statistical procedures would include:

1. Help in improving the selection and upgrading of factory, office, sales, and supervisory and executive personnel. In some instances a standard procedure is used; in others, tailor-made tests are devised. For some companies tests can be selected or developed that can be administered, scored, and interpreted by the company's own clerical employees. Help is given to improve the application form and interviewing procedure.

2. Appraisal and development of executive personnel. Tests and personal counseling show individual executives how to get better results from their subordinates, how to work better with their superiors, and how to develop better teamwork within the organization.

3. Morale studies to locate unhealthy situations and to assist in developing corrective measures to change them.

4. Vocational guidance to help an individual get a clearer insight into his own strengths and weaknesses, and thus to set up ultimate goals for himself and to determine on the first steps leading to those goals.

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California 1945 Oil Production Is Higher

CRUDE PETROLEUM produced in California during 1945 amounted to 328,262,400 barrels, valued at $342,756,767 at the well. This is the largest annual yield of crude oil ever reported in this State although the 1926 value exceeded that of 1945. The 1944 output was 311,717,804 barrels, worth $330,659,802. The totals of quantity are compiled from monthly reports filed by the operators with the State Oil and Gas Supervisor. Such major petroleum producing counties as Kern, Orange, Santa Barbara, and Ventura showed an increase in output in 1945 over that of 1944, with other counties showing a decline, although the value of Fresno County was higher. Kern County led all others, passing Los Angeles County which outranked Kern from 1923, to 1943 inclusive.

There were 538,273,934 M. cu. ft. of natural gas, worth $35,362,313, produced and utilized (sold or used) in California, compared with 467,743,258 M. cubic feet, valued at $31,797,418 in 1944. The 1945 output of utilized natural gas is the largest annual yield on record in this State.

ASSURE TOP PERFORMANCE

WEBSTER ELECTRIC FUEL UNITS

In today's planning of new products or in selecting replacement parts for repairs, it will pay you to choose Webster Electric Fuel Units. They are quiet running and prove easy to service. The mounting features are simple—they have a quick cut-off. Lubricated outboard seal bearing is another built-in feature. Their design is correct; their manufacture is skillfully and carefully carried out. Add to these features their outstanding performance record and you have good sound reasons for specifying Webster Electric Fuel Units.

WEBSTER ELECTRIC IGNITION TRANSFORMERS

The Webster Electric Transformer is manufactured with care. Balanced windings and correct insulation are important parts of construction. The finished transformer gives dependable, instant starting. Webster Electric Transformers are built to be interchangeable—they are of small efficient size—they are equipped with convenient primary connections. The fact that they have proved dependable in the field merits their consideration and use for new equipment and repair.

WEBSTER ELECTRIC Thermodrive

Thermodrive is designed to regulate the fan speed in a forced warm air heating system so as to give more even room temperatures, along with more economical heating performance.

Thermodrive automatically increases fan speed as bonnet temperature increases. Speed increases can be as much as 65 percent from low to high. The off-cycle operation is reversed, and fan continues at decreasing speeds until cut-out temperature on bonnet control is reached.

A warm air "sample" is continuously drawn from the bonnet and discharged over a thermostatic bellows, which in turn actuates a sliding sheave of a split pulley. This changes its effective diameter and results in either increased or decreased speed of the fan.

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"Where Quality is a Responsibility and Fair Dealing an Obligation"

Establish Joint Committee for Oilheating the Veterans

THE FIRST MEETING of the Joint Oil Heat Committee on Veterans' Housing took place at New York's Pennsylvania Hotel on June 26, under the chairmanship of W. A. Matheson, president of OHI. The committee is an outgrowth of a resolution passed at the Philadelphia Convention in April, through which the industry expressed its intent to Wilson Wyatt, National Housing Expeditor, to do all possible to back the Veterans' Program.

The committee membership of 22 individuals will be named in a subsequent issue of the magazine. The list is temporarily withheld pending legal department clearance for some of the major oil company men to serve. Included on the Committee is an approximate balance of oilheating equipment manufacturers (including boiler and furnace men), large retail marketers of fueloil and burners, and major oil company representatives. In addition, A. E. Hess, managing director of OHI, is secretary of the Committee and Robert Gray, of FUELOIL & OIL HEAT, is a member in the capacity of analyst.

At the meeting, J. H. Hart of the Mechanical Equipment Section of the Federal Housing Administration at Washington, explained to the group the Federal Housing Administration status at the present time in the Housing Program. Mr. Hart stated that the housing situation is of a nature which will require the careful planning and production of all branches of the heating industry and the use of all types of fuels in order to guarantee the total building result which the Government is striving to attain with the aid of private industry. The Federal Housing Administration contemplates the use of many pre-fabricated houses as well as those which will be produced under builder programs. All houses will be low heat loss type having insulation. Space limitation, for the installation of equipment, will be a factor for consideration and study and pre-fabricated housing particularly indicates a choice for automatic heating. Mr. Hart stated that the Federal Housing Administration plans careful inspection on those houses which the agency will insure and he suggested that insofar as possible, new equipment intended for use in Veterans' houses should comply, for acceptance, with commercial standards already in effect and understood by the various branches of the heating industry. Mr. Hart stated that the Federal Housing Administration already holds mortgages on hundreds of thousands of homes which have been equipped with oilheating facilities which have proven satisfactory. He pointed out, however, that space limitations in the new home planning may indicate that equipment which has been supplied in the past will be excess in capacity as well as in physical size, and some engineering changes probably are an immediate necessity.

Robert Gray provided information on the location of 429,491 housing units which have been authorized by the Government up to May 31. Mr. Gray's figures, developed at Washington, showed that 57,516 houses are authorized in the Middle Atlantic area. A partial breakdown of this figure showed 16,330 in the New York City area; 5,083 Buffalo; 1,650 Albany; and 11,462 Newark. Approximately 35% of the houses will sell for $6,500 and under, with a minimum sale price of $5,000. Mr. Gray said the record indicates that housing authorizations, in the period covered, are approximately the same in the Middle Atlantic, East-North Central, and South Atlantic States, with the New England States seeking only approximately 25% of the authorizations granted in the above three areas. Authorizations for construction are being granted at an increasing rate now as compared to the first five months of the year.

He then developed the fact that at Washington the record indicates a minimum of 20% of new housing will favor automatic oil-heating and if other field surveys are borne out, that minimum figure can increase appreciably. Fueloil men present at the meeting indicated that there was no doubt that the fueloil industry could take care of the new housing requirements in the grades of oil needed, in an entirely satisfactory and economical manner and they made the point that the fueloil industry has never in its history failed to meet the requirements which have been imposed upon it.

As a result of the facts developed at the meeting in connection with engineering requirements and equipment, the Chairman referred the necessary equipment engineering study to the Engineering Committee of the Oil-Heat Institute, Frank H. Faust, General Electric Company, Bloomfield, N. J., Chairman.

Mr. Matheson speaking at the conclusion of the four-hour session, stated, "This Committee has here today engaged in important and basic considerations in connection with the oil-heating industry's part in the success of a housing program which will not fail. It has become a common practice to refer to this Veterans' Building Program as a G.I. housing program, but I think that it is in actuality a pattern for an American housing program because the G.I. is the average American, both in desires and earning capacity. It would be a mistake to assume that the plans for our industry, which have been under consideration here today, are plans which will be greatly changed at the conclusion of the Veterans' housing task. The style of home, and the needs of the people who will eventually live in these homes, it seems to me, will change very little as this housing program goes on over the planned period into a total of something in excess of 12,000,000 homes. There's a civilian housing need which can be met with the same types of homes and equipment going in them. For months the oil-heating industry has based its future plans on the expectation of doubling the present oil-heating installations by the end of the first five post war years. That would mean approximately 5,000,000 installations in use. The figures and facts developed today make it appear that the requirements have been underestimated by about a million installations and it's not improbable at all that we will have 6,000,000 installations operating at the end of the first five post war years. The industry has no small task before it and the Joint Oil-Heat Committee has here today started the planning required to satisfy the need. All branches of our industry were represented in this meeting and they are all vitally interested in Veterans' Housing. The first steps, in connection with industry engineering, have been determined. We will go on from there as rapidly as possible."

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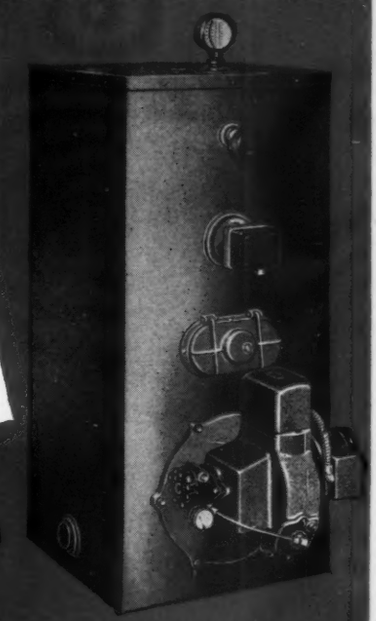
Quality and Dependability Assured by 20 Years of Manufacturing Experience



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CONVERSION OIL BURNER

FURNACE BURNER UNIT

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MANUFACTURING integrity . . . a code that for twenty years has helped Century Engineering Corporation produce the kind of oil-fired heating equipment you can sell with confidence. The unseen benefits attained by using the finest materials available and precision manufacturing methods assure many years of dependable service. You offer your customers top-quality merchandise with Century products. Service costs are reduced and customer satisfaction increased when you install dependable Century equipment.

Century has hundreds of unsolicited testimonials from satisfied users. That satisfaction is your assurance that Century continues to stress dependable service and low maintenance costs.

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OIL BURNERS • BOILER-BURNER UNITS • WARM AIR FURNACES
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Wyatt Writes Praise Of OHI Housing Plan

WILSON W. WYATT, administrator of the National Housing Agency, has expressed his appreciation for the work planned by Oil Heat Institute to provide oilburners for the veterans' housing program. In a letter to President Matheson, Mr. Wyatt says:

"I greatly appreciate the cooperation of the National Oil-Heat Institute in carrying forward the Veterans Emergency Housing Program. You can be sure that the National Housing Agency will give full assistance in your efforts to serve veterans and their families in this critical emergency.

"I am deeply interested in your plan for a general industry committee to find means of providing equipment for veterans' housing at a cost within the means of those of average income. It seems to me that this type of cooperative action is something that is needed in many industries if we are to achieve our housing goals.

"I am bringing this letter to the attention of the officials in National Housing Agency concerned with providing needed equipment at reasonable cost for our program. I know that they will take full advantage of the opportunity of working with your committee.

"I note your statement that your company has decided 'to contribute engineering knowledge and development in return for similar assistance which we might obtain from others in the industry so that we might effectively meet the challenge the housing program has placed before us.' This seems to me to be deserving of the highest commendation."

Look INTO THE FLAME WITH A "COMBUSTION XRAY LENS"

To Check OIL FIRES!

We've been able to obtain a limited number of lenses which will permit you to look right into the center of the flame to see how the oil burns—while at the same time *protecting your eyes* against the injurious rays of the fire box. You can now observe and check the fire for black streaks, ragged ends, uneven or torch-type flame, smoky tips, "cold fire" and then make the necessary adjustments.

This will also enable you to check the claims that we've been making for KLEEN-FLO. A real "before and after" test. First observe the fire as is—then add KLEEN-FLO to the tank as instructed—24 hours later look again through the "Combustion XRAY Lens." You should notice a definite improvement—a bright, hot fire, clean tips, elimination of black streaks and ragged ends—a clean, steady and more efficient oil fire. Take advantage of our special offers listed below—TODAY.

SPECIAL
COMBUSTION TRIAL OFFER

1 "Combustion XRAY Lens"
1 Quart KLEEN-FLO
BOTH FOR $1.50

FREE OFFER — A case of KLEEN-FLO at dealer price and a "Combustion XRAY Lens" free of extra cost

COMBUSTION UTILITIES CORPORATION
1451 BROADWAY NEW YORK 18, N. Y.
New England Distributor
ALLIED APPLIANCE COMPANY
111 Berkeley Street Boston 16, Mass.

Fractional Motor Prices Up; Burner Problem Unsolved

UNDER ORDER 264 of RMPR 136, OPA on May 13 raised sharply the prices of virtually all electric motors, including fractional horsepower. The rise on small motors is 27% from the prewar base period, and the 9% increase of last winter is included in the 27%. There is not too much hope, however, that this increase will help to get more oilburner motors for the simple reason that burner motors were underpriced in relation to other motors; thus when they all get a raise the oilburner motors are still less desirable to make. With only limited quantities of copper and electric steel coming to the motor manufacturers they naturally favor the more profitable items.

Steel Boiler Price Increased Again

PRICE CEILINGS FOR manufacturers and distributors of low pressure steel boilers were raised, effective June 5, 1946, to a total of 23% above the October 1941, level, OPA has announced. The new increase together with the 14% increase authorized by OPA on February 10, 1946, brings boiler prices to the 23% level.

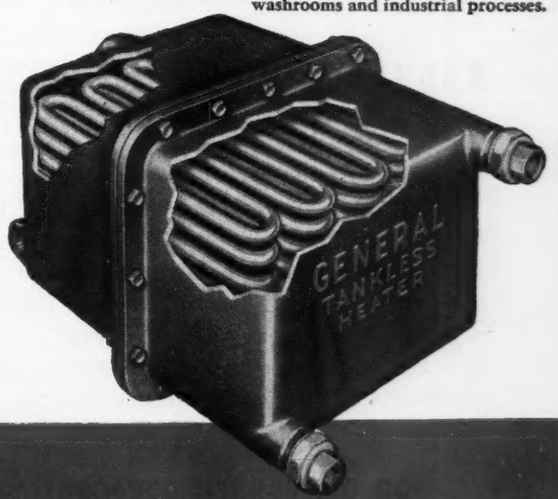
This increase was granted to assure manufacturers base period profits after recent wage and materials cost increases reduced their margins. Materials costs rose almost 18% and labor about 48% over the October, 1941, levels, OPA points out. The present price levels are designed to give the industry the same profit factor as it realized during the base period of 1936-1939.

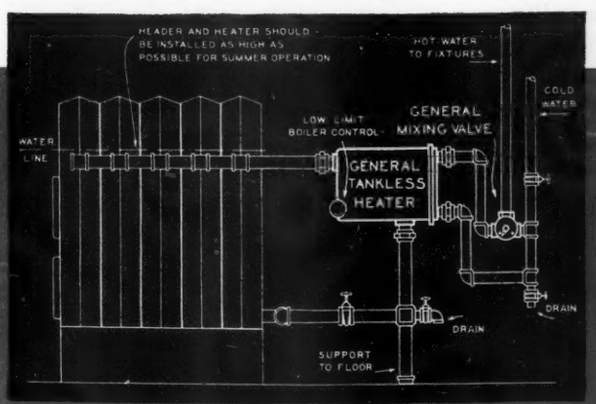
WANT TORRENTS OF HOT TAP-WATER...

FOR A MERE DROP IN THE ?

70 G.P.M. capacity for factory washrooms and industrial processes.

You can get up to 35 gallons of hot water a minute in home installations of General Tankless Water Heaters. No storage tank required. Space-saving, money-saving, easy-to-install, General Heaters use boiler water to give an instantaneous supply of hot water . . . continuous, pure and rust-free. No complicated piping to waste heat. No long waiting for a tank to re-heat. For more hot water at lower cost, specify General Tankless Heaters. Catalog 16 gives full details. General Fittings Co., 125 Georgia Ave., Providence, R. I.





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TANKLESS WATER HEATERS

Also Tank-Type Water Heaters • Thermostatic Mixing Valves
Water-Hammer Silencers • Live-Steam Heaters
Coil-Heated Tanks • Pipe Unions

fuel oil heat

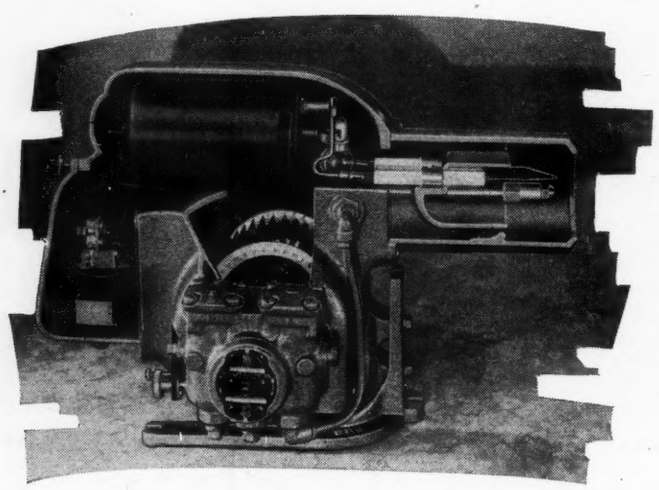
Fueloil Men Direct Frozen Food Group

SEVERAL FUELOIL MEN recently were elected officers and directors of United Frozen Food Distributors, Inc., New York, a recently formed company to sell cabinets and frozen food to consumers.

R. F. Horan, widely known in the fueloil industry as the moving force in the original organization of the Distribution Division of Oil Heat Institute and an "old timer" in the oilburner trade, was reelected president of the frozen food organization. R. S. Blazer, vice president of Cleveland's Allied Oil Company, Inc., serves in the same capacity in United, and the other vice president, Robert F. Doepel, president of Braun Bros. Oil Co. of Chicago, is equally well known to the oil trade. William D. Baskett, Jr., of Allied Oil Company, Inc., serves as Treasurer; and David Wepman, formerly with General Electric's Heating Division, and with Automatic Burning Corporation, is Secretary.

The Board of Directors, too, represent some outstanding fueloil organizations. In addition to Messrs. Horan, Blazer, Doepel, and Baskett, the fueloil trade is represented by Congressman Hadwen C. Fuller of Parish Oil Company, Parish, New York; and John E. Henry, of Capitol City Automatic Heating Corporation, Albany, New York. Edward F. Marquard, widely known as Allied's Operating Retail Manager in Cleveland, also serves on the Board of Directors.

A number of cooperative committees, representing many of the company's distributors, were also elected, and this list includes such widely known oil firms as Griffith Consumers Company, of Washington, D. C.; Burrell Oil & Air Conditioning Corp., of Harrison, New York; and Northern Controlled Heat Company, of Watertown, New York; and others.



HERCO Built-in Efficiency

ASSURES YOU LASTING PROFITS

FOR profits that *last*, wise dealers are selling oil burners that give lasting performance. Herco's built-in efficiency—every part carefully engineered and in perfect alignment—protects you against constant service calls that "eat-up" your profit. The HERCO name itself is your guarantee of a better burner . . . for the quality in a Herco means simplicity in design—easy accessibility—sturdy, efficient construction and incomparable fuel economy!

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HERCO
The Oil-Thrifty
OIL BURNER

U. S. Department of Labor Fueloil Prices April

FIELD INVESTIGATORS for the Department of Labor monthly check prices of principal fuels in several cities in each section of the country. Getting retail quotations from various suppliers in each market, the prices are averaged and published. Those in the table that follow were taken April 15 (cents per gallon):

	Range	*No. 1*	*No. 2*	*No. 3*
Boston	9.54	9.40	8.10	8.10
Bridgeport	9.30	...	7.92	...
Fall River	...	...	8.40	...
Manchester	10.10	...	8.80	...
New Haven	9.30	...	8.00	...
Portland, Me.	9.20	9.10	8.00	...
Providence	9.30	9.22	8.10	...
Baltimore	...	8.85	8.00	...
Buffalo	9.90	9.90	9.00	9.00
Newark	...	9.00	8.00	8.00
*New York	...	...	8.08	...
Philadelphia	...	8.99	7.95	7.92
Rochester	10.00	10.00	8.70	8.70
Washington	...	9.30	8.36	...
**Chicago	8.47	7.89	7.88	7.89
***Cleveland	...	9.06	8.55	...
***Detroit	...	8.96	8.45	7.93
**Des Moines	...	8.77	8.26	8.26
Milwaukee	8.88	8.83	8.38	8.33
Minneapolis	8.90	8.80	8.34	8.36
Omaha	...	8.60	8.10	8.10
**St. Louis	8.98	8.34	8.06	8.06
St. Paul	8.80	8.80	8.40	8.45
***New Orleans	...	9.24	7.72	7.72
Norfolk	...	9.00	7.80	...
Richmond	...	9.30	8.00	...
**Denver	...	9.18	7.65	...
Portland, Ore.	...	8.05	7.05	...
***Seattle	...	8.55	7.52	...

*Price includes 1% sales tax.
**Price includes 2% sales tax.
***Price include 3% sales tax.

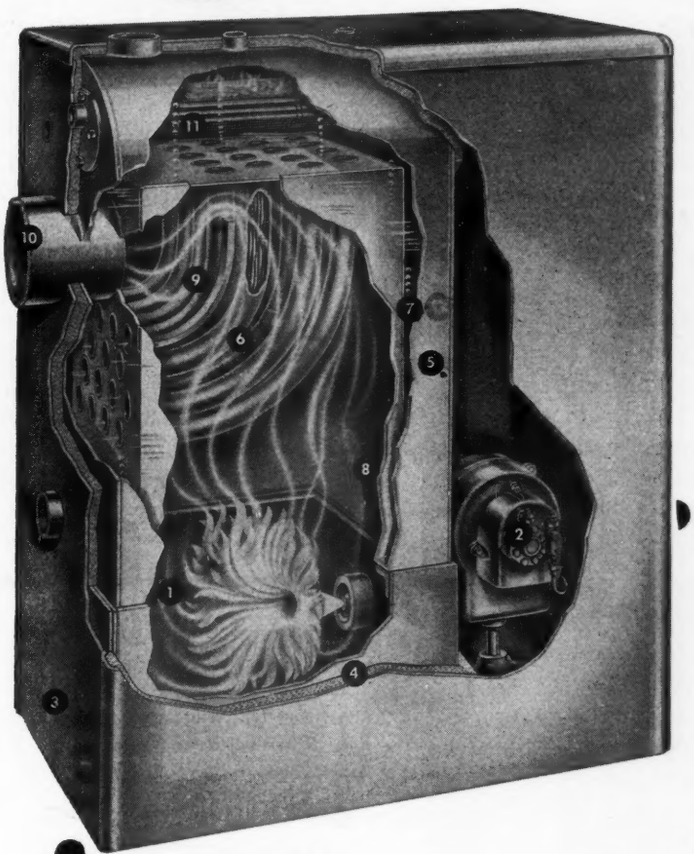
Standard Heater & Oil Equipment Co.

Announces an

STANDARD HEAT EXCHANGERS ENGINEERED FOR ECONOMY

Entirely NEW

WATER TUBE BOILER



A MODERN COMPLETE "ONE PACKAGE" HEATING PLANT FOR BETTER HOMES!

The cut-away section of the STANDARD WATER TUBE BOILER illustrates its sturdy, dependable construction and modern design. Note the large full length and height of the combustion chamber which permits gases to radiate to the tubes and water backed walls. A large tankless domestic water heating coil provides abundant hot water for bath, kitchen and laundry, while the completely insulated boiler jacket prevents loss of heat, thereby guaranteeing the highest degree of effectiveness and economy. The oil burner is compact . . . designed for accurate operation and long, dependable service.

1. Scientifically designed COMBUSTION CHAMBER.
2. Modern silent OIL BURNER.
3. Heavy gauge steel JACKET.
4. Thick asbestos lining INSULATION.
5. Tough, steel plate BOILER SHELL
6. WATER TUBES.
7. WATER SPACE.
8. INSPECTION PORT.
9. BAFFLE PLATE.
10. FLUE GAS OUTLET.
11. DOMESTIC WATER HEATER.

Write for Bulletin No. 107 containing complete information regarding sizes, dimensions, weights, connections, and other important features.

Developed and Designed for DEPENDABILITY EFFICIENCY and ECONOMY . . . and *Beauty* too!

Standard Heater & Oil Equipment Co.

245 CORNELISON AVE., JERSEY CITY 2, NEW JERSEY

Shows Little Change In Milwaukee Fuels

THE 1946 EDITION of the Milwaukee Journal's annual Consumer Analysis shows little change in the relative use of the three principal fuels for home heating. The survey this year was compiled from 7,000 questionnaires representing 3% of the families in the Greater Milwaukee area. These questionnaires were returned in person to the Journal, and checked for completeness and accuracy by staff members. It has been found that returns greater than 3% of the total families does not materially change the results. A shopping bag filled with well known household products was presented to each person who returned a questionnaire.

Returns this year indicated that 86% of the families heat with coal or coke; 12.4% with oil, and 2.1% with gas. This represents a slight gain for gas during the last year at the expense of coal and oil. The trend for recent years is shown in the following table:

	Oil		*Coal and Coke*		*Gas*	
	%	No.	%	No.	%	No.
1946	12.4	28,314	86.0	196,879	2.1	4,830
1945	12.8	29,201	87.1	198,279	1.8	4,052
1943	10.7	23,384	86.4	188,704	1.9	4,083

There is no break-down to show the number or percent of the families who have central heating and those who use space heaters. It is significant that 14.6% of the homes that would rent from $50 a month and up used oil, but 28.7% of the homes with a rental value of less than $30 were oilheated. Homes in the $40 to $50 class used oil in 4.4% of the cases, and in the $30 to $40 class were 8.4% oil users.

◈

New York School Plans Oilburner Service Course

THE TRADE AND TECHNICAL SCHOOL of the New York YMCA, now housed in a separate three-story building of its own on West 66 St., New York, is planning to open a new, completely equipped school August 5, to teach oilburner installing and servicing. Chief instructor will be Charles Burkhardt, for several years an instructor and service manager of metropolitan dealers.

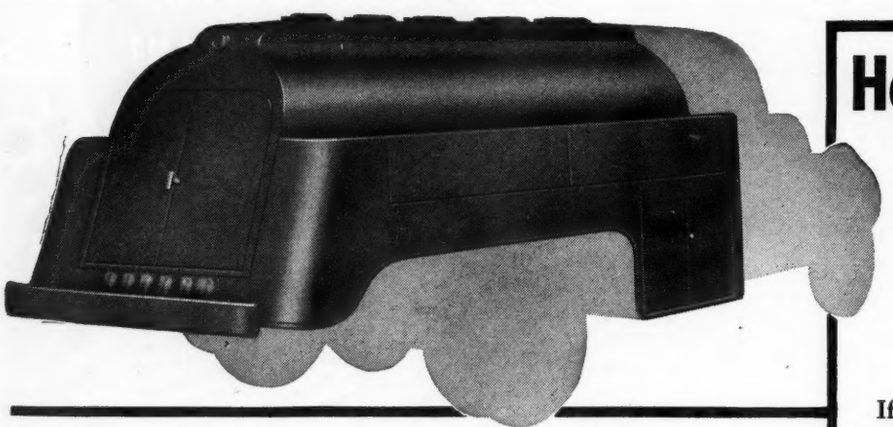
Present plans are to have both day and night courses. The length of the day course has been set tentatively at 240 hours, 30 percent of the time to be spent on theory and 70 percent on practice. The length of the night course has not yet been established but it will probably be somewhat shorter. If the demand for training is great enough several classes will be run concurrently so that as many as a hundred or a hundred and twenty-five students may be in training at one time, separated into classes starting one week or two weeks apart.

◈

Dodge Finds Building At New All-Time Peak

F. W. DODGE Corp., has reported that construction contracts awarded in the thirty-seven states east of the Rocky Mountains attained an all-time peacetime high in May. The total of all contracts was $952,418,000, which was exceeded only once before during the wartime peak of June 1942, when contracts totaled $1,190,264,000. The previous highest peacetime volume was $667,097,000, reported in May 1928.

Residential construction contracts totaled $463,600,000 during the month, compared with $370,590,000 in April and $47,206,000 in May of last year. The



Heil Standardized Truck Tanks

give you dependable, efficient all-purpose rural delivery service

If you have a 1½- or 2-ton chassis with approximately 84-inch cab-to-axle measurement, here is a 5-compartment job with capacities of 800 and 1000 gallons that does a profitable job for you.

Substantial weight saving, greater strength, integral construction, and many other features make this unit one of the most outstanding developments in the transportation tank field . . . and one of the most profitable to operate. It makes your rural delivery service a paying proposition.

T-201

• Check these outstanding features •

TANK
— mild steel, elliptical shape, smooth-skin, one-piece shell construction insures greater longitudinal and transverse beam strength.

MANHOLES
—opening in each compartment is 11"x16" fitted with a 10" diameter hinged filler.

BEAVER TAIL
— forms integral rear compartment — equipped with side-hinged doors. Accommodates hose reel and meter equipment if desired.

SKIRTING
—trim design minimizes maintenance, facilitates cleaning, adds to appearance.

SUBFRAME
— weight-saving, steel box-section longitudinal members and tapered hardwood sills support tank over entire length.

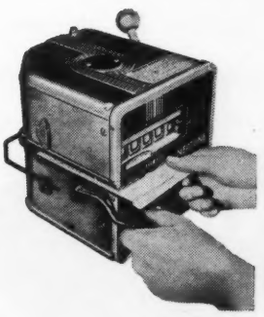
PIPING
— to eliminate joints and flow restrictions, each compartment is fitted with 2" lightweight steel tubing with large sweep bends.

DOORS
— all-steel, flanged on all sides, well reinforced. Rubber bumpers are provided for doors when open.

Write for bulletin or see your nearby Heil distributor.

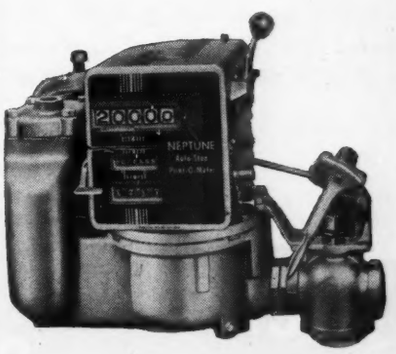
THE HEIL CO.
GENERAL OFFICES • MILWAUKEE 1, WISCONSIN

PRINT GOOD-WILL ON EVERY DELIVERY TICKET



Create customer confidence and good-will—put Neptune Red Seal Meters with Print-O-Meter Register on each fuel oil truck. With the easy-to-use Print-O-Meter you print an accurate accounting record of each delivery. Errors in taking down meter readings are avoided—you provide a dispute-free receipt or invoice, for all gallonage delivered is in the total on the ticket. Your customers know that every gallon they pay for went into their tanks. They feel that dealing with you is good business . . . and this means better business for you!

Ask for complete details of all the advantages of the Neptune Red Seal Meter with Print-O-Meter Register. Write today.



This "Compact Type" Red Seal Meter has the Print-O-Meter Register and Auto-Stop features—provides complete space and weight-saving metering equipment. The Auto-Stop shuts off flow at pre-set gallonage — permits fully automatic deliveries.

NEPTUNE RED SEAL METERS

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50 West 50th Street
New York 20, N. Y.
Branches: **Atlanta, Boston, Chicago, Dallas, Denver, Kansas City, Mo., Los Angeles, Louisville, Philadelphia, Portland, Ore., San Francisco, Long Branch, Ontario**

A-156A

total number of residential units to be provided in last month's contracts was 66,489, exclusive of dwelling accommodations in hotels, and dormitories. This volume is more than double the number of units called for in contracts let during the first five months of last year.

Publicly-owned residential construction accounted for 3 per cent of the dollar volume of May contracts, the remainder being classified as privately-owned construction.

Cast Iron Radiation Production Increasing

PRODUCTION OF CAST IRON radiation has been increasing steadily since V-J Day in spite of strikes, labor shortages, material shortages and pricing problems, according to figures released by Civilian Production Administration. Less than 1,000,000 sq. ft. a month was produced immediately after the end of the war, but had increased to 2.35 million square feet in March and 2.56 million square feet in April. It is estimated that May production reached more than 3 million square feet. Material shortages, arising chiefly from strikes in other industries and from general shortages, still continue to retard production. Manufacturers report increased difficulties in securing pig iron, coal, rod stock, bushings and nipples.

Department of Interior Gets National Petroleum Council

TO PERPETUATE the cooperation that has existed between Government and the oil industry during the war years, Secretary of the Interior Krug has appointed a committee of 85 oil industry men to work with the newly formed Oil and Gas Division within the Department of the Interior. Of the 85 appointees, 55 were members of the Petroleum Industry War Council, 21 are officials of trade associations, seven are from the gas industry. It is significant, and unfortunate, that only one member, Clyde Morrill of the Atlantic Coast Oil Conference and the Independent Oil Men's Assn. of New England, has his primary business interest in fueloil and oilheating, while the competing fuel, gas, has the seven members. Those named are:

K. S. Adams, pres., Phillips Petroleum Co., Bartlesville, Okla.

H. T. Ashton, pres., Western Petroleum Refiners Assn., care, Socony-Vacuum Oil Co., St. Louis.

Col. T. H. Barton, pres., Lion Oil Co., El Dorado, Ark.

Burt R. Bay, pres., Northern Natural Gas Co., Omaha, Nebr.

R. H. Blair, pres., National Oil Marketers Assn., Troy, Mo.

Jacob Blaustein, Pikesville, Md.

Paul G. Blazer, board chairman, Ashland Oil & Refining Co., Ashland, Ky.

W. B. Boyd, Jr., pres., American Petroleum Institute, New York.

Reid Brazell, Leonard Refineries, Inc., Alma, Mich.

Russell Brown, IPAA, Washington.

J. S. Bridwell, pres., Bridwell Oil Co., Wichita Falls, Tex.

W. F. Clinger, pres., Pennsylvania Grade Crude Oil Assn., Tidioute, Pa.

Robert H. Colley, pres., The Atlantic Refining Co., Philadelphia.

Stewart Crocker, pres., Columbia Gas and Electric Co., New York.

Howard A. Cowden, pres., Consumers Cooperative Assn., North Kansas City, Mo.

Henry M. Dawes, pres., The Pure Oil Co., Chicago.

E. E. DeGolyer, DeGolyer & MacNaughton, Dallas.

O. D. Donnell, pres., The Pure Oil Co., Findlay, O.

Fayette B. Dow, National Petroleum Assn., Munsey Bldg., Washington.

Col. J. Frank Drake, pres., Gulf Oil Corp., Pittsburgh.

Gordon Duke, Southeastern Oil, Inc., Jacksonville, Fla.

Effects Fuel Savings Up to 20%

Because it reduces stack temperature and increases CO_2 readings, this new R&I Combustion Chamber Baffle saves up to a fifth of the fuel. This should make it easy to sell, and there's a nice profit in it for you.

R&I Baffle is made of a tough refractory, reinforced in the legs and cone with stainless steel.

The legs can be adjusted to fit any combustion chamber not over 16½" wide inside. The cone of baffle is 10¼" in diameter.

Get them from your supply house. Write today for Bulletin OB-97.

Refractory & Insulation Corp.

116 Wall Street, New York 5, N. Y.

CHICAGO 4, ILL. — PHILADELPHIA 3, PA.

DETROIT 16, MICH. — NEWARK 2, N. J.

R&I Combustion Chamber BAFFLE

That noise you hear in Jersey

is tons of new machinery rolling into the new Thatcher furnace factory

SORRY to make such a clatter, but putting together a production line to make furnaces is a job you just *can't* do quietly. Most of it's big, heavy stuff—things like new power shears, press brakes, power rolls, automatic drills, arc welders and punch presses.

All of it—along with our 96 years of heating know-how—is going into the finest furnace plant that ever served you—the plant we've wanted to build for years. Brand-new from the foundation up, it'll soon be turning out the finest furnaces ever to carry our name.

Now, more than ever, keep your eye on Thatcher—for tomorrow's comfort for your customers of today.

THATCHER BOILERS ARE IN PRODUCTION NOW

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KEEP YOUR EYE ON THATCHER

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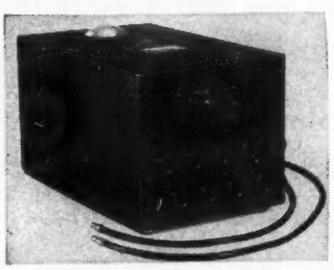

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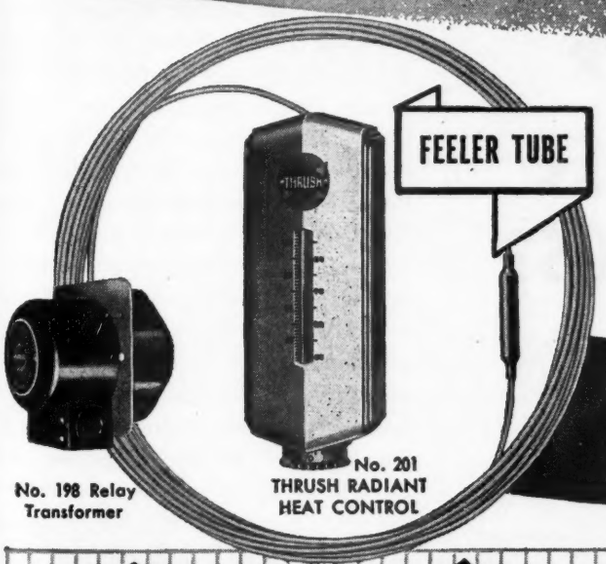

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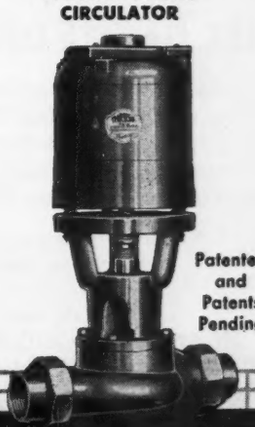

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Readers' Forum

A. B. CUNNINGHAM & SON
Baltimore

Editor:

I have just finished reading "Oil Heating the Veterans" by Robert Gray in the May issue of FUELOIL & OIL HEAT. The entire talk is very interesting as well as timely, and I was particularly interested in that part of it which dealt with the handling of builder's business in connection with the heating of these veterans' houses.

It is probably true that the large percentage of oilheating business done for the next few years is going to be in connection with this veterans program. This means that business is going to have to be done with builders and it certainly should make oilburner manufacturers and distributors do a little thinking. I have given the matter a lot of thought, and based upon my past experience with builders, I have at this time no satisfactory ideas for handling it. I am a distributor and deal only through retail outlets who are prepared to sell, service, and install our equipment and if a man wants to give his equipment and the user of it a fair break, there is no other way to do this heating business. This thing of letting anyone install equipment who'll do it and then turning the service over to some concern who is primarily interested in selling oil to the job, or not bothering with service at all is no good. It might approach some degree of satisfaction in connection with pressure type burners, but much vaporizing equipment will be used in these small houses and there are by far too few men who are qualified to service vaporizing burners. Responsible dealers must handle the installation and service on these jobs—dealers who want a user to get a good heating job and who want to maintain their own good reputations in the heating field.

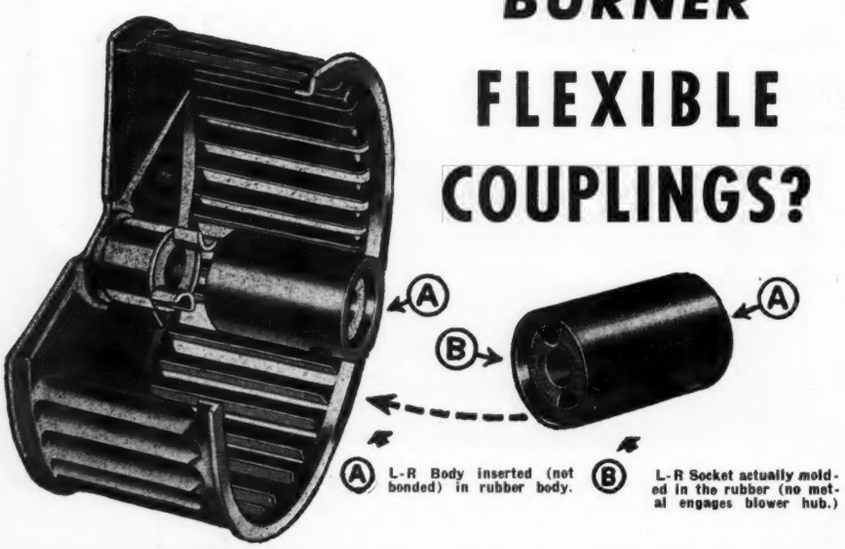
Builders are already trying to buy at wholesale prices. Before the war they didn't care whether a furnace gave satisfaction or not and I question whether they will now either. They cannot be blamed too much for this attitude because their business is building not heating. Right now they cannot generally buy at wholesale prices direct because equipment is so scarce. However, already it has come to my attention that equipment is being purchased direct by builders without a care in the world about service or installation. Why any manufacturer or distributor would sell direct now instead of through his dealer outlets is beyond me, but it has started and it will keep increasing as quantities of equipment increase. A dealer simply cannot buck this kind of competition.

Should the manufacturers of prefabricated houses start selling a heating unit as a package along with their house, shipping them all over the country for anyone to put in, adjust, and service, I hesitate to think what would happen to the reputation of the oilburner generally.

It is a rather serious problem to the heating industry as a whole for the reason that Mr. Gray is dead right in his remarks that poor operating oilheating equipment is the best salesman for gas and other competitive fuels. Already much damage has been done before the war, but it is nothing compared to the damage that will be done if matters continue as they are.

The answer does not lie in trying to talk the builder into paying a fair price for his heating equipment, or trying to

what's NEW in OIL BURNER FLEXIBLE COUPLINGS?



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Quick, easy installation. Blowers with L-R jaws on hub supplied by blower manufacturers.

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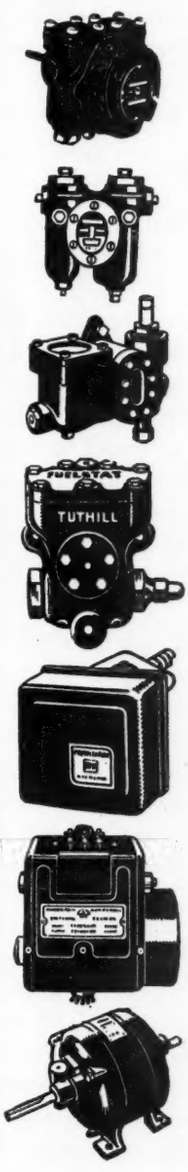
TAKE ADVANTAGE OF THE SID HARVEY SUMMER DEPOSIT PLAN



IT'S LIKE MONEY IN THE BANK! YOU CAN DRAW OUT ANY TIME YOU WANT!

The Summer Deposit Plan is a plan whereby you can send us all of your defective oil burner parts—*on deposit*. They will be rebuilt and you will be entitled to get an exact duplicate in perfect condition in the fall or at any time you want up to January 1, 1947.

You do not have to pay anything until you actually need the part and then only our regular rebuilding price. There is no extra charge for storage or anything.

NOW is the time to build up your stock of service parts without laying out any money. Get every pump, valve, control or motor that is defective in shape for the coming season *this summer*. Materials and parts are still scarce — You'll need them. And you'll have them in perfect condition too when you want them if you do it now.

Sid Harvey's is the place to send them. It costs no more to have them rebuilt "from the ground up" in the largest and best equipped shop in the industry, and you can get your entire stock rebuilt now without having to lay out one cent, with the Summer Deposit Plan.

If you need a shipping container—we've got one for your use—FREE. Send for a Harvey Two-Way Shipping Box. It's a sturdy wooden box made to carry pumps, valves, etc. that can be used time and time again.

SID HARVEY WILL BUY UP DEFECTIVE UNITS, NOW!

Send us any repairable unit that you don't want rebuilt for your own account. We will buy it from you—fair prices and fair treatment as in the past.

SPECIAL

Defective Sundstrand, Tuthill or Webster fuel units exchanged for BRAND NEW UNITS at attractive prices. Act quickly while supply lasts.

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fuel oil & oil heat

talk the dealer into selling at such a low price that he goes broke. Some builders do, of course, give the matter of a good heating job consideration and, of course, some dealers do go broke, but it is not the general case.

The answer must, then, lie with the manufacturers and distributors or the Federal Housing Administration who is putting up the money for these houses. I doubt that it would be practical to try to get manufacturers and distributors to agree to sell only to regular dealer outlets who would sell, service and install equipment. However, I believe that the government could go a long way toward putting a stop to poor heating jobs by demanding that builders supply proof or bond, if necessary that their heating equipment was being installed according to the manufacturers specifications and that a local, responsible dealer would install and service it and allow him whatever additional cash was necessary for him to buy this service. And finally, hold him responsible for the proper operation of the job. By "dealer" I mean a responsible, established concern, not a jack-leg that is on the builders payroll who is gone along with the builder. If a builder had to assume more responsibility, he might be more careful what kind of a job he got and whether he purchased equipment that was up to standard.

I think that dealers will be glad to take this business and they won't expect to get a full retail price for it. They won't have to in view of the quantity, but they are entitled to a fair profit and I mean something more than 10% gross.

Mr. Gray's article is excellent and gives a broad picture of the situation we are up against right now and I think you do the industry a great service by printing items of this character.

W. E. CUNNINGHAM.

A WATTS PRODUCT
for oil heating profits
NO. 71 TEMPERING VALVE
For tankless heaters and storage tank systems. Mixes the direct hot water with cold water and delivers to the outlets tempered water calibrated from 80° to 200° as desired. Made in sizes ¾" and 1".

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A NAME TO REMEMBER
Automatic · TEMPERATURE *and* PRESSURE REGULATING SAFETY DEVICES ·
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Editor:

Reading through your June issue I noticed with great interest that portion relating to "Uniform Service." While the service angle is to many, their livelihood and main source of income, it nevertheless to a great majority of the dealers, is a problem. I always considered it as such since it can readily sap what profits may be realized by the selling end of the business.

I presume that hundreds of others like myself have scratched pads full of figures in an attempt to arrive at a solution to the service problem, which would satisfy the dealer and the customer. As for myself, I always wound up with answers that were unsatisfactory to me and that did not seem to be the real solution to the problem.

My personal viewpoint is that the industry has reached a point where it must make some drastic changes. The main point as I see it is not how or by what manner to charge the customer for servicing and maintaining his oilburner equipment but how to reduce the cost of service per year on his equipment. The fact that the customer is told point blank that each year he owns an oilburner, it is going to cost him $15 to $25 or more to keep it running and doing its job, is to my mind poor psychology. Almost everyone knows that mechanical equipment will require attention and will from time to time incur expense for service thereto. But when you tell a man before hand or

This fine oil burner...

Your best bet for Better Business!

TODAY'S PETRO OIL BURNER welcomes your most exacting examination. Point by point, feature by feature, it invites critical inspection, study and comparison. Go as far as you like—for the more detailed your investigation, the more enthusiastic your appreciation of those unmatched performance features that have identified Petro Oil Burning Equipment for over 40 years.

Because Petro is and always has been the first choice of discriminating owners who want only the best in oil heat, today's demand for Petro is unprecedented. This gratifying trend is your best bet for volume oil burner sales in the months and years ahead. Decide now to take advantage of it!

Consisting of attractively styled conversion burners and units, Petro Oil Heating Equipment is distributed through established heating wholesalers. Write for the name of supply house nearest to you!

PETRO MEETS ALL NEEDS...
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You may obtain Petro Oil Burners handling from 1 to 18 gal. per hr. of "domestic" fuel oils, as well as units handling from 11 to 145 gal. per hr. of heavy "commercial-industrial" oils.

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fuel oil & oil heat

he realizes that, we will say, $20 a year goes to the maintenance of the equipment, he immediately takes a long-range viewpoint and figures that in 10 years his maintenance cost will be equal to 50 to 75 percent of the present cost of a conversion job. Further, he thinks of what the $200 or so will purchase and then hesitates.

If the salesman selling autos, home appliances, or even homes was to tell the customer that upon the purchase of the article it would immediately begin to cost him a certain fixed sum in maintenance or upkeep, it would slow up sales.

The industry now seems to be on the threshold of realizing that gas is its real competition. Before the war when oil was selling at 6½¢ and in some places 6¢ per gallon, the lower cost of fuel itself made quite a convincing argument for oil. Today, however, we are faced with an 8¢ per gallon price and the oil industry feels that it needs an additional 1¢ per gallon in order to make the production and marketing of heating oils a profitable portion of the business.

With oil prices like these the "Cost of Fuel" argument has disappeared or is fast disappearing in a number of sections.

We all want mechanical equipment to be as trouble free as possible and when the Oil Burner Industry tells the customer that a certain fee is necessary to maintain his equipment, it automatically admits that the equipment is not as service free as they have led people to believe and therefore the oilburner salesman has two strikes upon him right off the bat when selling against gas.

The ill of the oil burner industry seems to be service yet no concerted effort on the part of the industry with all its engineering knowledge is put forth to lick it.

Why? Because, I believe, the oilburner industry to be largely a group of copycats who follow in some one else's footsteps and further to be composed of a group of manufacturers making individual mechanical parts for a burner who have no other view in mind but to promote the sale and profit to themselves of the particular part they manufacture. It is a recognized fact that many manufacturers are merely assemblers. Many of the manufacturers of today know very little of basic oilburner principles. If Doe and Co. puts a gadget around his burner nozzle that increases the combustion efficiency, Roe and Co. tries to follow suit. Ideas for the better mixing of the air and oil for combustion are brought out and in some cases even patents are issued on them. These ideas are actually not basically new but rebirths of past generations. Years ago engineers knew and stated the importance of good air-oil control and mixture but burner manufacturers did not heed the word.

The high pressure atomizing burner as we know it today, was developed over 20 years ago. Because it proved better than the other principles on the market for domestic heating at that time, it became to an extent the universal principle and since that time all anyone has tried to do was to refine the assembling and manufacture of that particular principle in order to have a more efficient and lower cost unit than originally entered the market.

There is no doubt that this type of oilburner has gone a long ways in putting automatic oil heat to the front. It has without question proved its worth, but it has today in my opinion reached the end of the trial. New demands are made today that this type of oilburner is finding it hard to meet. Chiefly among these de-

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SIZES
available for Air Tubes, inside diameter:
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—because it results in *higher* CO_2's—*a better fire with greater efficiency.* Laboratory tests and experience in the field have proved the truth of this statement.

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Gas-Fired, Steel
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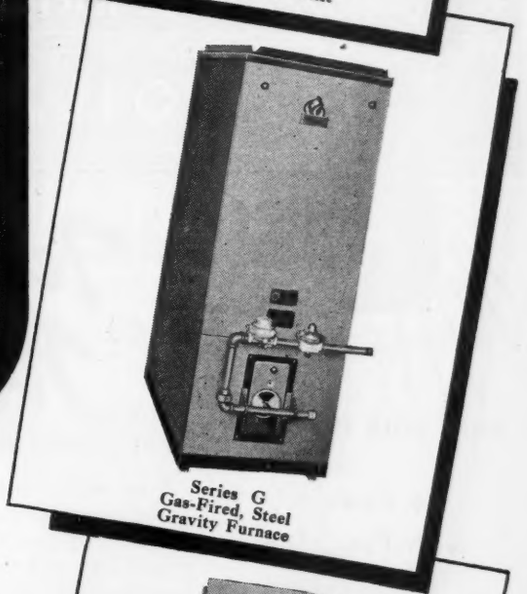
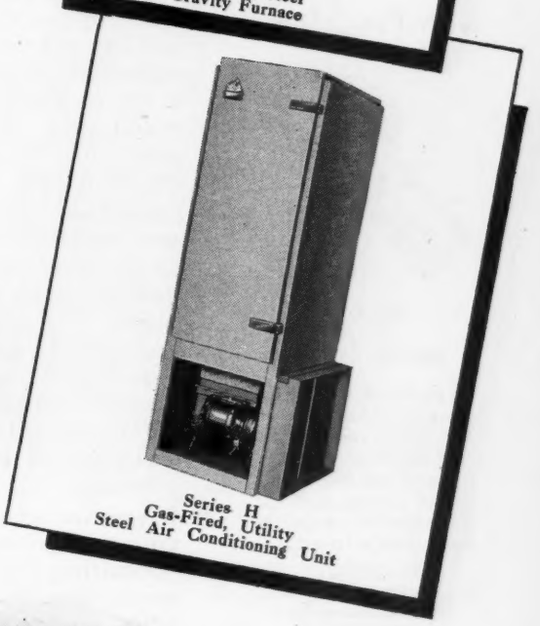


Series G
Gas-Fired, Steel
Gravity Furnace



Series H
Gas-Fired, Utility
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● **Talk LUXAIRE—and you talk the same language your prospect uses when expressing his ideas of home heating equipment.**

1. **LUXAIRE—a revolutionary line of gas-fired heating equipment that has caused a sensation with the heating trade.**
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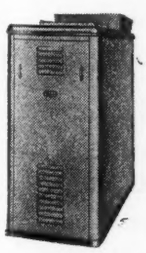
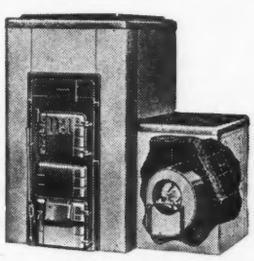
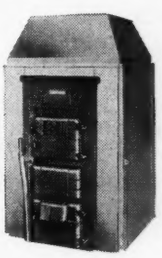


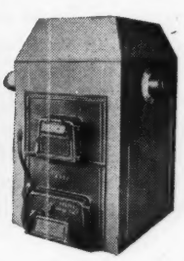
Series 8000
Oil-Fired, Steel
Air Conditioning Unit



Series AC-700
Coal-Fired, Steel
Air Conditioning Unit



Series 700
Coal-Fired, Steel
Gravity Furnace



Series C
Coal-Fired, Cast
Gravity Furnace

THE C. A. OLSEN MFG. CO. - ELYRIA, OHIO

Luxaire HEATING & AIR CONDITIONING UNITS

fueloil & oil heat

mands is the service problem. When it cost $10 to $25 a year admittedly by dealers who have a right to know, it's costing too much to maintain this equipment and the answer as I see it is that this type of oilheating does not fit the present picture of competing in a post-war market with gas

The low pressure atomizing burner with its mixing chamber, etc. requiring additional parts and added power consumption is not the answer either. Nor is the wall-flame rotary, the atomizing vertical rotary or the present conception of the vaporizing burner.

I feel that the ultimate product must have a simplification or elimination of stack relays and safety controls. Also since we are coming into an era of fractional gallon capacities, nozzles with small orifices will have to be eliminated; ignition assemblies, if found to be absolutely necessary (since many engineers are of the opinion that on-off firing is not efficient and will eventually pass along) should be designed to prevent fouling and should not be exposed or located in a position to collect all the dust and dirt passing through the burner. Further, I believe that pump units can be eliminated from basement tank jobs. The only pump necessary being with outside tanks.

There surely must be men within the oilburner and fueloil industries who know enough about burning oil to develop the type of a burner needed for todays market. A burner costing far less to produce and install and a burner on which service, including labor and parts, will not exceed, on the average, $5 per year.

I can see no reason when burning small quantities of oil that a 100 lbs. or approximate oil pressure is necessary. It requires power to develop and maintain this pressure. From my experience of studying and experimenting with oil burning, I feel that pump, mixing chambers, etc. are unnecessary parts of the equipment on the average home installation. Burning oil in small quantities is simple. Why make a tough job of it?

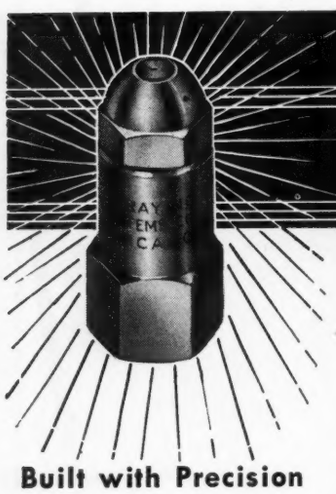
Is the Oil Burner Industry going to stand by and suffer as a whole because this-or-that pump, control or other accessory manufacturer or group of manufacturers expound the theory and promote the propaganda that such parts as they make are important to the burning of oil?

Let's see home manufacturer or group of manufacturers roll up their sleeves and develop the equipment necessary today. A piece of equipment that the average handy man can service the same as the average fellow tinkers with his car and keeps it going. Let's get away from the idea developed by a lot of engineers that a product has to be complicated in order to do the job. Let's de-gadgetize the present oilburner and get what is needed to cope with the gas competition.

It can be done and it will be done some day. Why not do it now instead of going through this service controversy for the next ten years and then look back and say "Why didn't we do that before?"

This letter may seem as though I am raving like a Psycho but it is just my honest and humble opinion. I become irritated when I think of the possibilities ahead for the oil burning industry—fuel and products combined—and recall how little is done in engineering and research to make heating with oil more attractive and worth-while to the public.

L. A. SCHULTZ,
General Manager.



SPRAYING SYSTEMS

OILJET ATOMIZING NOZZLE

Test This Nozzle...

Built with Precision

To Perform with Precision

For Better Oil Burner Operation

You will find the OILJET Atomizing Nozzle well worth the time required for test. Ability of OILJET to improve burner performance has been measurably demonstrated. OILJET operating efficiency is the result of design based on experienced spray nozzle "Know-how" plus maintenance of precision manufacturing standards.

Precision Construction... OILJET parts are precision machined to close tolerances. Wearing parts are Type 303 (18-8) stainless steel. Screen is welded Monel Metal.

Precision Performance... OILJET provides a highly atomized spray of uniform density. Available in capacities from 0.50 GPH upward. Oil volume accurately delivered at rated capacity for given pressure.

If you are an oil burner manufacturer, you are invited to send for OILJET Atomizing Nozzles for test. Please give nozzle dimensional size, spray characteristics, and capacity required.

OPTIONAL OILJET NOZZLE ASSEMBLY

Supplied without adapter. Consists of (1) brass core, with 18-8 stainless steel core top and welded monel metal screen, and (2) tip with 18-8 stainless steel orifice insert.

WHOLESALE DISTRIBUTORS
Write for information on representing us.

SPRAYING SYSTEMS COMPANY

4011 WEST LAKE STREET CHICAGO 24, ILLINOIS

SPECIALISTS IN THE DESIGN AND MANUFACTURE OF SPRAY NOZZLES

Deluxe Model 2A-300

Economy Model 1A-25

MORE SATISFIED CUSTOMERS MORE PROFITS

You can do yourself a good turn every time you recommend and install a General Filter . . . you benefit two ways, by increasing your profits and by adding to your list of satisfied customers.

General Deluxe Model 2A-300 holds two to four times more solids, wax, gum, moisture, and small particles than most filters. Provides *superfine* filtration and *extra long* cartridge life.

General's Economy Model 1A-25 will give full-season, trouble-free service for average home burner installations. Especially recommended for pot type and small pressure type burners. Single bolt construction with a synthetic oil resistant rubber seal gasket insures against leaks.

If you haven't already investigated the profit possibilities of General Filters, it will pay you to contact your jobber immediately.

Listed: Re-Examination Service, Underwriters' Laboratories

GENERAL FUEL OIL FILTER

GENERAL FILTERS, INC.

12890 Westwood Ave. **Detroit 23, Mich.**

Canadian Factory Branch: J. C. MacLachlan, 21 King Street East, Toronto.

DEALERS—here's a FLOOR FURNACE you can sell and forget

The original oil burning floor furnace, Kresky is the only one with forced air circulation bearing the Underwriters' label. Four sizes . . . easily installed . . . takes as little as 30" clearance. ★ Altho unprecedented demands necessarily limit current shipments to old customers, Kresky invites negotiations from live dealers for territories still open.

Listed by Underwriters' Laboratories, Inc. To Burn No. 3 Oil (Diesel) or lighter

KRESKY MANUFACTURING COMPANY

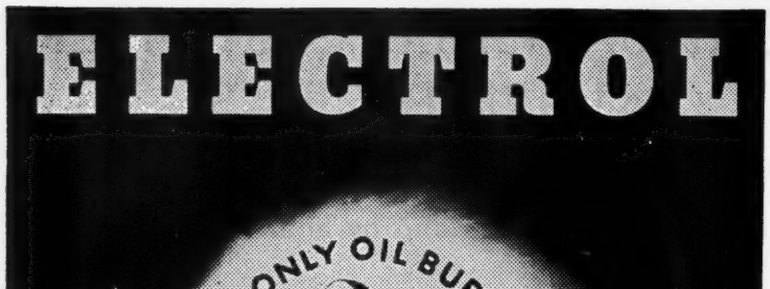
Pioneers in Oil Burning Equipment Since 1910

PETALUMA, CALIFORNIA

HEATING • COOKING • HOT WATER • INDUSTRIAL

Kresky Oil BURNERS

fuel oil & oil heat



WE AGREE with the EXPERTS

Leading authorities on oil burning state that certain items are essential for a perfect pressure atomizing burner. The trends of the industry bear out the correctness of their opinions. A good oil burner should have all of the following characteristics:

COMPACT, INTENSE FLAME . . . The Electrol inner and outer cone construction burns fuel completely in the combustion chamber. This old stand-by construction will be even more appreciated as "cat crack" oils become common.

QUICK CUT OFF . . . The Electrol drip eliminator with cut off point directly in back of the nozzle has a quick, positive action. It absolutely eliminates all after drip due to the reflected heat of the combustion chamber.

BURNER MOUNTED SAFETY CONTROL . . . The Electrol famous master control is installed, completely wired and tested at the factory. The sensitive element is unaffected by the efficiency of the boiler and gives constant performance regardless of stack temperature.

SELL THE EXCLUSIVE ELECTROL

ELECTROL BURNER MANUFACTURING CO., INC.

22 UNION AVENUE, RUTHERFORD, NEW JERSEY

PHONE — RUTHERFORD 2-8300

Industry Groups

Activities of local and national industry associations are reported monthly in this department. Secretaries are invited to send reports of their group's activities, to reach the editor by the 20th.

Heat and Ventilating Show Now More Than 80% Sold Out

TWO HUNDRED MANUFACTURERS already have engaged exhibit space for the 7th International Heating & Ventilating Exposition, scheduled for Lakeside Hall, Cleveland, Ohio, January 27 to 31, 1947. It will be held under the auspices of the American Society of Heating & Ventilating Engineers, and in conjunction with their 54th Annual Meeting.

Approximately 80% of the total exhibit area has been reserved, but there are still a limited number of choice locations available. It is expected that all space will be sold well in advance of the opening of the Exposition.

Manufacturers of heating, ventilating, and air conditioning equipment expect to eliminate production and material shortage difficulties and are planning to introduce their newest models at the Exposition. It promises to be one of the largest Heating & Ventilating Expositions in the series originated in 1930.

Among the other groups scheduling meetings during the same week is the National Warm Air Heating and Air Conditioning Association.

The Exposition is under the management of International Exposition Co., New York.

OHOT Holds First of New York Dinner Meetings

OIL HEAT OLD TIMERS, Inc., of the Greater New York Area, held its first dinner meeting at the Biltmore Gardens, Bronx, June 12, with 23 members of the newly formed group attending. Following dinner a business meeting was held to report on the formation of the organization and introduce provisions of the charter and by-laws. Dan Bierman, president, presided and Anthony J. Share is secretary.

Five members of the Board of Directors were elected by secret ballot for a one-year term. These were Russell Dempsey, Albert Evans, Alan Gilmour, E. B. Lipsett, and John J. Morro. This completes

a board of 15 directors with the ten incorporators. Each year five members will be elected for a three-year term. Officers, elected by the directors, are not allowed to succeed themselves.

Members present voted to hold a smoker for the next gathering, and discussion was held on the time of the meeting. It was felt that the summer vacation months were difficult ones in which to get a representative crowd together, but there was considerable pressure for another meeting as early as possible. The time and place was left to the board of directors and members are to be notified by mail.

The meeting served as a farewell party for Chris. J. Jensen who was leaving within a few days for three months in Norway. Chris, a native of Norway, is making his first return trip in thirty years to visit relatives and friends.

◈

Boston Old Timers Meet at Outing

A. W. (SKIPPER) BARR, regional director of the Old Timers Club for the Boston area, called a meeting of the members at the annual outing held June 28, and about twenty qualified members attended.

Most of the discussion centered around the formation of a local group to hold more frequent meetings. It was explained that the directors of the Club, meeting at Philadelphia in April, had voted not to recognize such local organizations as affiliated chapters. A committee was named to investigate the possibilities further and formulate a recommendation to the membership. It was thought possible that a local autonomous group could be formed for the benefit of the industry's members in the Boston area, the individual members of which could belong also to the national club.

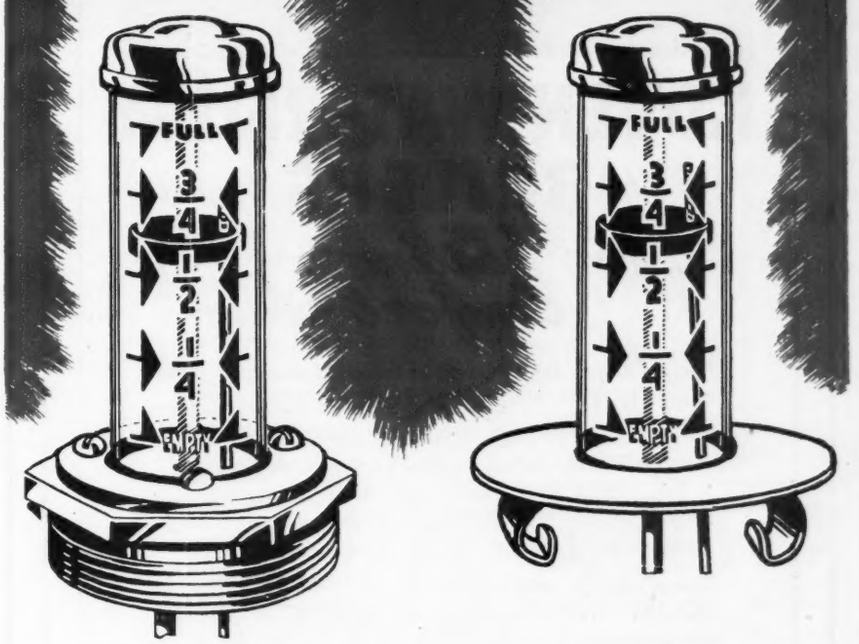
It was voted to hold local affairs for the benefit of duly qualified members and their guests, but not to sponsor dinners, outings, smokers or other events in conjunction with any other association or group.

◈

Oregon Dealers Consider Solid Fuels for Customers

OILHEATING MEMBERS of the Oregon Fuel Merchants Association, member of the Distribution Division of OHI, have been asked by the Board of Directors to make a check of the installations they will be

MEL Guaranteed Leakproof GAUGES

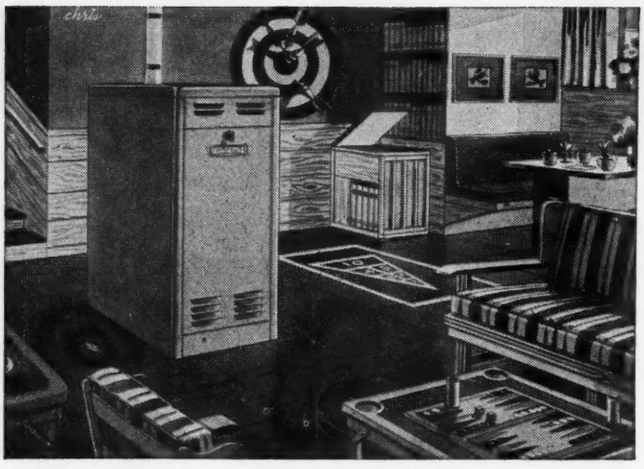


ADJUSTABLE RANGE

Considered by many to be the best gauges on the market . . . Mel Gauges made from the finest materials *by skilled craftsmen* are unbreakable, rustproof and vacuum sealed to prevent leakage . . . Mel Gauges are attractively priced and cost no more than the ordinary type due to specialized, quantity production . . . Inherent, immediately recognizable qualities readily sell themselves — help sell installations — create goodwill among your customers. *When ordering — specify the size of tank and tank opening.* (Available in 1½" or 2" pipe thread.)

Mel-Gauge COMPANY

EAST HAVEN, CONNECTICUT



KOVEN WATERFILM BOILERS

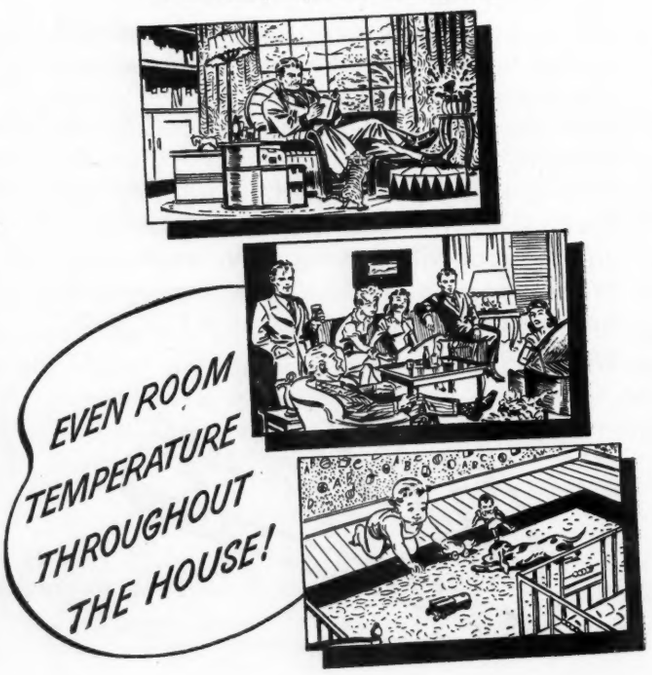
...for heating comfort plus

Plus *what* you say? Plus all of these advantages found only in KOVEN WATERFILM BOILERS:

UNIFORM HEAT—for comfort.
FAST STEAMING BOILERS—for quick heat.
EFFICIENT HEATING—for economy.
SMART MODERN JACKETS—for attractive appearance.
Made for automatic firing with oil, stoker or gas.

These reasons alone make the KOVEN WATERFILM BOILERS outstanding in their line. WATERFILM BOILERS are available in a variety of models suitable for large or small homes, apartment houses and industrial plants. For trouble-free operation, choose a WATERFILM for the job! Write for free illustrated booklet.

WATERFILM BOILERS, Inc.
154 Ogden Avenue, Jersey City 7, N.J.
Plants: Jersey City, N. J. • Dover, N. J.



able to make before next heating season, and advise those customers who are not likely to get burners to buy a supply of solid fuel. It is explained that new customers who do not yet have oilburners are reluctant to buy sawdust or coal, since they expect to have their new burners before fall. Several hundred tanks have been installed, and these new owners, still without burners, are not buying solid fuel while it is available.

There is a limited supply of coal in the state, sufficient to take care of present customer needs, though some dealers are completely out. A good stockpile of wood and sawdust is building up in dealer yards, but it is not possible for dealers to store enough for all customer needs for the winter ahead.

Wisconsin Oil-Heat Releases More Newspaper Advertising

WISCONSIN OIL-HEAT ASSOCIATION has released another piece of advertising through the *Milwaukee Journal*, headlined "Oil-Heat, The Dependable Year Around Fuel." Copy emphasizes No Work, Low Cost, Plenty of Oil, and Security.

"Milwaukee home owners who have tried both oil and gas report oil-heat is cheaper from 20% to 50%," the ad says. "It also compares favorably with most coal-fired heating plants. Since 1937 the price of fuel oil has increased only eight-tenths of one cent a gallon."

Atlantic Coast Conference Meeting Reelects Officers

ATLANTIC COAST OIL CONFERENCE members, at their annual meeting in New York, relected their officers for the 1946-47 year, and discussed possible program. Clyde G. Morrill, secretary, reviewed the history of the conference and its war service to the East Coast area.

A new committee on research was named in addition to the present Executive Committee, Primary Committee, and committees on Nominations, Legislation and Competitive Fuels. A new committee has been formed to make cost analyses and some individual market studies. It is composed of Albert Buckley, Providence, R. I.; H. M. Spade, Hartsdale, N. Y.; Henry Schwartz, Brooklyn, N. Y.; J. E. Kunkel, Philadelphia, and Robert Gray, New York.

Oilheating Discussion at API Marketing Meeting, Denver

THE GENERAL COMMITTEE for the Division of Marketing of the American Petroleum Institute will hold its second meeting of the year on July 10 at the Brown Palace Hotel, Denver, Colorado. Eric V. Weber, Chairman, will preside

The morning session will be devoted to the business meeting and will include reports of the following committees: Program Committee—Chairman, B. L. Majewski, Deep Rock Oil Co., Chicago; Lubrication Committee—Chairman, L. C. Welch, Standard Oil Co. of Indiana, Chicago; Special Studies Committee—Chairman, W. L. Faust, Socony-Vacuum Oil Co., New York.

In the afternoon the public group session on Marketing will hear three speakers followed by an informal session. The scheduled speakers are Robert Gray, of FUELOIL & OIL HEAT, New York, who will discuss current oilheating problems, Howard Page, Standard Oil Co. (N. J.), New York, with a paper on "World-wide Supply and Demand through 1950," and Wallace Hughes, of Hearst Publications, who will talk about service stations.

◈

Illinois Homes Bulletin Released On Insulation

SMALL HOMES COUNCIL of the University of Illinois has released number F6.0 of its Circular Series to the public, covering home insulation. The eight-page bulletin is one of a series issued by the Council on the various phases of home building.

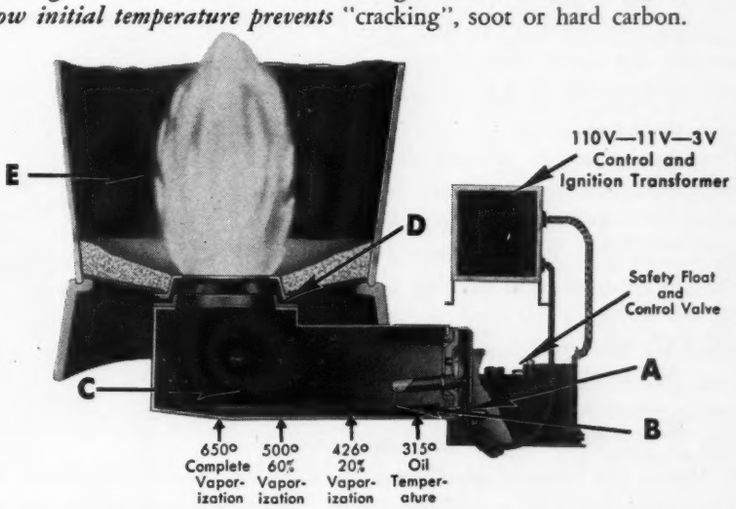
After describing insulation and what it does, the types of insulation, and where it may be installed, the bulletin presents tables of typical savings that may be effected in one-story and two-story houses by different types and thicknesses in the ceiling, in the walls, and by weather strip and storm doors and sash. The back page is given to insulation of pipes and ducts.

◈

OHI Membership Considers Two Constitution Changes

A SPECIAL MEETING of the membership of Oil Heat Institute will be held at 9 a.m., Tuesday, July 9, at the Hotel New Yorker, New York, to amend the constitution to provide for more than one vice-president. Present regulations allow only one. Three articles of the constitution will be changed to provide for new vice-presidents.

From the user's standpoint, the patented, elongated design of the H. C. Little oil burner (below) is greatly superior to the round design of other vaporizing burners (left). The H. C. Little burner will operate on heavy, low-cost furnace oil at very high efficiency and with clean, smokeless combustion. In a round burner, the ***high initial*** oil ***temperature*** will "crack" heavy furnace oil, causing soot or hard carbon. In the elongated H. C. Little burner, the ***low initial temperature prevents*** "cracking", soot or hard carbon.



Actual test results on Size #2 H. C. Little Oil Burner burning #3 furnace oil (27° Diesel oil) at full load.

A—Oil is admitted here, spreads out over bottom of burner and is heated and vaporized. **B**—Exclusive, patented 3-Volt Hot Wire Electric Ignition System. **C**—Primary Air Ports for premixture of air and oil vapors before combustion. This premixture produces a rich, soot-free gas. **D**—Secondary Air, admitted through space between upper and lower burner rings, completes process necessary for perfect combustion without soot or smoke. **E**—Prepared gases burn here.

EXCLUSIVE, PATENTED 3-VOLT ELECTRIC IGNITION SYSTEM

H. C. Little Electric Ignition is simple, reliable, safe, economical—and truly automatic. It is not a hi-low fire method and has no pilot light. The burner either operates or is shut down completely—no fuel is wasted by a pilot fire. The low voltage current consumes very little energy, creates no noise or radio interference.

Established dealers still have first call on our output, but we suggest you write and find out the possibilities for the fairly near future.

Factory Representatives in Principal Cities

H. C. Little BURNER CO.
Dept. 6, San Rafael, Calif.

The Greatest Name in Low-Cost Automatic Oil Heat for Small Homes

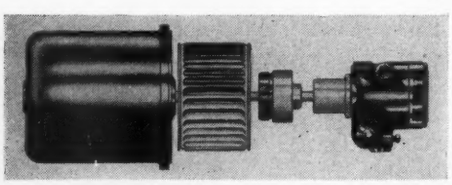
New Products

Gilbarco Shows Clutch To Delay Pump Start

THE ECONOMY CLUTCH, an automatic device to delay the introduction of oil into the combustion chamber until an adequate supply of air is assured, has been introduced by Gilbert & Barker Mfg. Co., Springfield, Mass. The small clutch is installed on the motor-fan-pump shaft of the burner between the fan and pump. The motor and fan start together, but operation of the pump is delayed until the motor is up to speed.

The clutch consists of spring-loaded arms on the motor shaft which are thrown outward by centrifugal force to engage a drum on the pump shaft. On the start the motor and fan operate to establish a flow of air through the draft tube of the high pressure burner; as the motor speed increases the clutch engages to start the pump, and the oil spray is introduced and ignited in sufficient air to avoid a smoky start. When the burner cuts off, the decreasing motor speed disengages the clutch and stops the pump while the fan continues to turn by the momentum of the motor and purges the combustion chamber.

Chief claim for the Economy Clutch is clean starting and stopping to avoid soot formation on the surfaces of the heating plant. Officials also point out that the



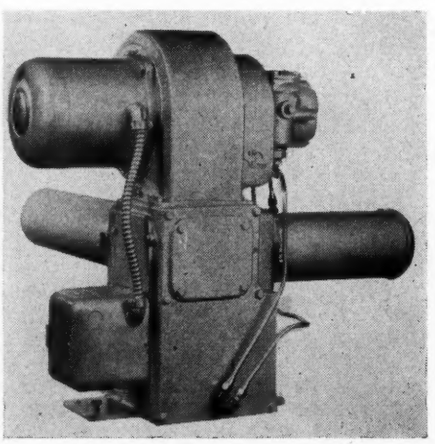
motor starts with almost no load, and this will lengthen the life of the motor. Tests during the last winter on a number of installations show savings of 10.9% to 24.5%, claimed to be due to lack of soot which would have been built up in the many starts and stops of normal burner operation.

The new clutch will be used on all sizes of Esso and Gilbarco burners in the future.

One Dual Burner Fires Furnace and Water Heater

ONE OILBURNER which fires the heating plant and also operates to heat hot water in a direct-fired heater, has been announced by Freeland L. Jennings, Lima, Ohio. The unit, with two draft tubes and two nozzle and ignition assemblies, has an automatic switching device which gives firing priority to the heating plant. Hot water is made during the time the thermostat is not calling for heat.

Side panels in the fan housing allow the water heater to be installed on either

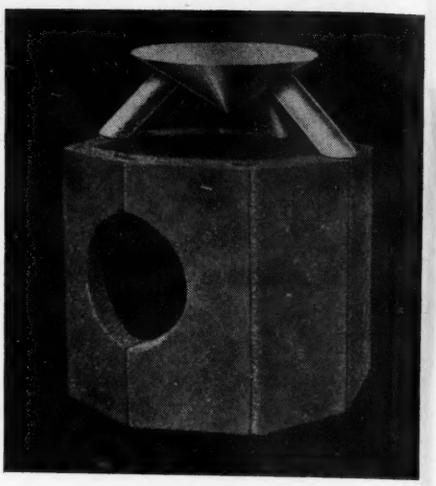


side of the heating plant. The straight-away draft tube and nozzle fires the heating plant and another assembly at right angles fires the water heater. An air shutter closes off that draft tube which is not in use.

The heart of the system is the Dual Burner Transfer Mechanism, the controller that selects the unit to be fired. It is planned to license any burner manufacturer who wishes to use the system.

New R & I Chamber Baffle

REFRACTORY & INSULATION CORP., New York 5, N. Y., has announced a new combustion chamber baffle of the three-legged "milk stool" type for installation on top of the firebox. The manufacturer claims use of the baffle will affect fuel savings up to 20% through the reduction of stack temperature, and higher CO_2.



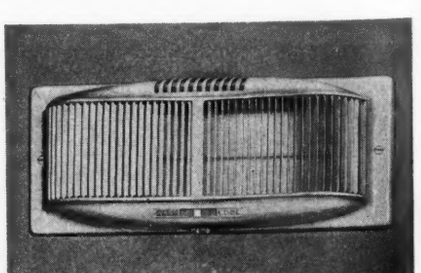
The baffle is made of a refractory with stainless steel reinforcement of the legs and cone. Legs of the baffle are adjustable to fit any combustion chamber with an inside width of not more than 16½ ins. The cone of the baffle is 1¼ ins. in diameter.

M-H Develops Warm Air Grille With Own Control

DEVELOPMENT of a self-contained, automatic register for domestic warm air distribution systems has been revealed by the Minneapolis-Honeywell Regulator Company.

The device, called Grad-U-Flow Register, requires no electrical or mechanical power other than that which it generates itself through temperature changes, said John E. Haines, vice president in charge of the commercial controls division.

The new register, which is no larger than the conventional warm air outlet, has a self-contained system which regulates dampers to either permit more or less heat into the area in accordance with



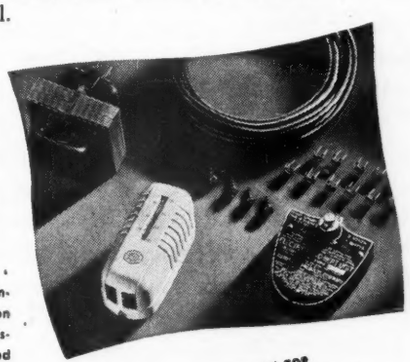
the demand. The device is equipped with a control setting so that the home owner may select the temperature desired for each room; after this setting is once made, temperatures will hold at the selected level automatically.

Drawing its own power from changes

Make EXTRA Sales and Profits this Summer . . .

Install A-P THERMOSTATIC HEAT CONTROL on all your present Oil Burning Space Heaters!

This new "Sales Package" can be installed on *any* oil burning space heater using any A-P Constant Level Oil Control made since 1938. This means *extra* sales to most of the customers to whom you sold heaters since 1939, for they will all welcome the added convenience, luxury and oil-saving advantages of *Automatic Temperature Control* — steady room comfort at the touch of a thermostat dial.



A-P Model 240-ED Electric Heat Regulator Conversion Set

EASY TO INSTALL . . .

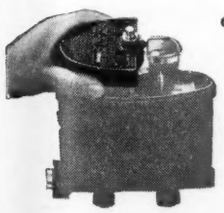
Complete Conversion Set includes: Electric Conversion Top, Wall Thermostat, Transformer, Wire, Staples and full instructions.

JUST MOUNT ELECTRIC CONVERSION TOP ON THE MANUAL CONTROL NOW ON THE HEATER . . .

CONNECT TO TRANSFORMER . . .

AND WALL-MOUNTED THERMOSTAT . . .

AND ANY VAPORIZING BURNER HEATER IS READY FOR AUTOMATIC TEMPERATURE REGULATION.



Write for Details and Prices today . . . FOR SUMMER PROFITS

Selling Aids Available . . . FREE
Colorful folders for counter distribution or statement mailing; counter or window display cards are available free to help you to ready summer sales of A-P Heat Regulator Conversion Sets.

AUTOMATIC PRODUCTS COMPANY

2458 NORTH THIRTY-SECOND STREET, MILWAUKEE 10, WISCONSIN

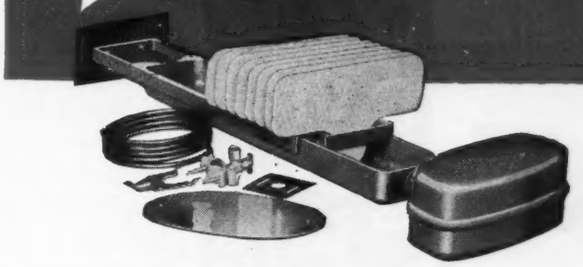
DEPENDABLE *Oil Controls*

DESIGNED TO ELIMINATE SERVICING

Check these advantages in the New Viking Humidifier

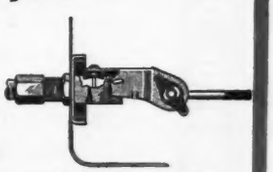
VIKING "TOP SEAT" FLOAT VALVE

COPPER FLOAT TANK

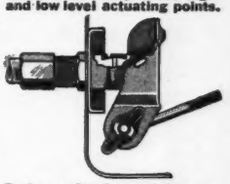


For Dependable Humidification

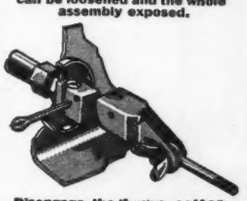
Positive Action



Throttle type action maintains the proper water level at all times . . . no complicated high and low level actuating points.



For occasional servicing or cleaning the brass wing nut can be loosened and the whole assembly exposed.



Disengage the brass cotter key and the complete float assembly can be removed for inspection or cleaning.

Here is the humidifier you've been waiting for. Simple and easy to install and designed to operate for years with little or no attention.

Exhaustive study and research under actual operating conditions has dictated the need for a simple, easy to clean valve and an acid resisting water supply tank. Viking has the solution.

THE VALVE

Made entirely of brass and located above the water level in the supply tank. Simple rocker action . . . no springs no sliding parts.

THE TANK

Deep drawn from 24 oz. copper in a single piece . . . no seams . . . no welds. Located outside the bonnet or plenum . . . readily accessible for occasional inspection or cleaning.

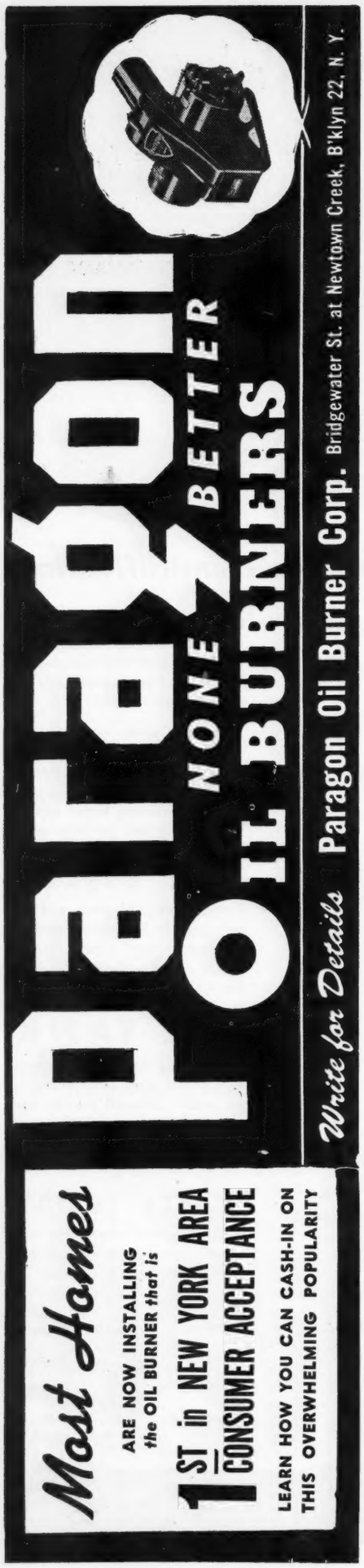
WRITE TODAY

. . . get complete information and specifications on a dependable humidifier.

Viking

ARMY E NAVY FOR EXCELLENCE

AIR CONDITIONING CORP. 5600 WALWORTH AVE. CLEVELAND 2, OHIO



in temperature, the register "motor" consists primarily if a remote temperature bulb, a bellows and a lever which positions the dampers to maintain the required temperature. In operation the bulb, which is mounted under a cover on the front of the grille, reacts to changes in temperature of the induced air from the room and causes the bellows to either expand or contract. A system of levers attached to the bellows opens or closes the dampers in direct and immediate response to room temperatures, thus maintaining selected levels at all times. The control setting is actually a screw-mechanism which alters the balance point of the levers.

Not scheduled for manufacture until production lines can be established, the Grad-U-Flow Register will be able to be installed in all homes equipped with forced warm air heating systems.

◈

Offers Soot Remover And Sludge Solvent

EASTERN PRODUCTS CO., Fords, N. J., has announced a line of Korexo chemicals, including a soot remover, sludge solvent and a de-greasing compound for the removal of carbon, gum, paint, grease and oil from metal or glass surfaces.

Korexo "Sooteater" is a powder to be sprinkled on hot sooty surfaces. It unites with the carbon of the soot to form an easily combustible mixture. It is recommended that it be applied first to the smoke pipe through the draft regulator, and then to the heating surfaces of the boiler or furnace.

The fueloil treatment, applied "four drops to the gallon," or a pint to each 1,000 gallons of fueloil to inhibit sludge formation. To clear up badly sludged tanks it is recommended that the treatment be used in the proportion of a pint to each 400 gallons of oil and sludge.

◈

Eddington Introduces Air Cones and Stabilizers

EDDINGTON METAL SPECIALTY CO., Eddington, Pa., is now ready to supply Air Cones and Stabilizers to the oil burner industry as a means of getting a better fire with greater efficiency.

Laboratory tests and experience in the field have indicated that when Air Cones and Stabilizers are properly used higher

CO_2's are obtained. The Stabilizer holds the electrodes and nozzle in a firm position while the twist of the fins gives a swirl to the air flow. The air flow is carried through by the air cone at just the right point for mixture with the nozzle spray.

◈

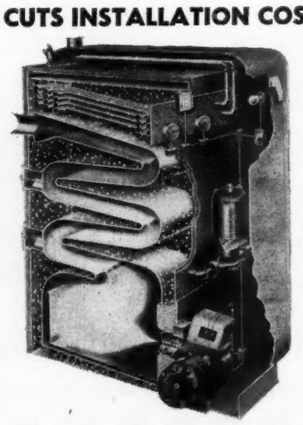
Webber Becomes National Distributor for Nu-Trojan

A. R. WEBBER CO., New Haven 11, Conn., has become national distributor for the Nu-Trojan refractory combustion chamber manufactured by McLeod & Henry Co., Troy, N. Y.

The new chamber is made from flint clay with walls 2 ins. thick. The material does not fuse below 3,180°, and is installed without retaining bands to hold the parts in place. Four sizes are available; one consisting of four parts, and the other three of six parts, all sufficiently small to go easily through a firebox door.

Each chamber is packed with a "Steel Mixture" baffle head and fifteen pounds of flooring and bonding materials. Chambers are available for immediate delivery to any part of the country, according to the distributor.

CUTS INSTALLATION COSTS



PACKAGED HEAT

Only oil-burning boiler delivered with *controls, burner and circulator mounted and wired at factory!* You just "pick it up . . set it down . . . plug it in!"

Canadian Distributor: Aetrite Equipment Company, 768 St. Paul St., W., Montreal 3, Can.

PENN BOILER & BURNER MFG. CORP.
LANCASTER, PENNSYLVANIA

SILOO FUEL OIL TANK SOLVENT

FOR MAXIMUM BURNER EFFICIENCY

SILOO FUEL OIL TANK SOLVENT is the positive, safe method of cleaning fuel oil storage tanks and equipment. This easy-to-use liquid disperses water due to condensation—clears clogged pipe lines, oil filters, strainers and burners. Just pour it into the tank. By using **SILOO,** free flow of oil for improved combustion and heater operation is assured.

SILOO FUEL OIL TANK SOLVENT is absolutely harmless to fuel and equipment. It is non-inflammable, non-explosive, non-toxic, non-corrosive—always safe to store and use. Ideal for space heaters, oil stoves, kerosene lamps, Diesel engines, etc.

SILOO FUEL OIL TANK SOLVENT is nationally advertised and boasts a large, eager market. Distributors and jobbers—take advantage of this widely accepted product—write for details today!

SOLVENTS FOR ALL TYPES OF PETROLEUM RESIDUES

Petroleum Solvents
CORPORATION
(Tank Solvents Division)

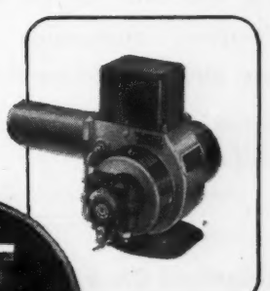
General Offices: 331 Madison Avenue, New York 17, N. Y.
Plant and Laboratories: Port Reading, New Jersey
Petroleum Solvents Corp. of Canada, Ltd.
Dominion Square Bldg., Montreal

Good Will Ambassador

EVERY Quiet May Oil Burner is accompanied by a good will ambassador... working for Quiet May dealers every day in the year . . . confirming Quiet May's leadership . . . reassuring Quiet May owners that they have made the very finest investment in oil heat.

The "ambassador's" name is Dependability. His credentials are the way our oil burners are built . . . **quality**-built through and through, from first to last.

Dependability naturally wins good will . . . everywhere and always.



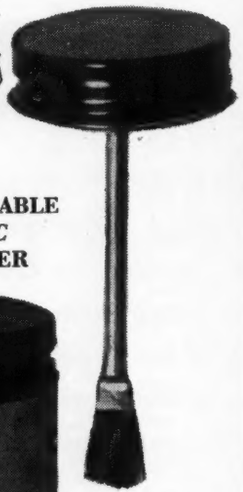
QUIET MAY OIL BURNER

MAY OIL BURNER division of GEROTOR MAY CORP.
Maryland Ave. and Oliver St. • Baltimore 3, Maryland

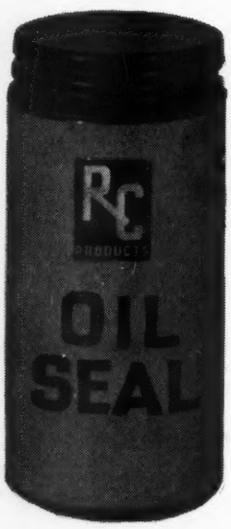
fueloil & oil heat

RC OIL SEAL

AN OLD PRODUCT IN A NEW PACKAGE



NON-BREAKABLE *PLASTIC* CONTAINER



BRUSH IN CAP FOR CONVENIENT AND ECONOMICAL APPLICATION

For use with oil and oil derivitives, ammonia, Freon gas, alcohol, and gasoline.

Seals against high pressure and vibration.

Ridgefield Chemical Products Company, Incorporated
Ridgefield, New Jersey

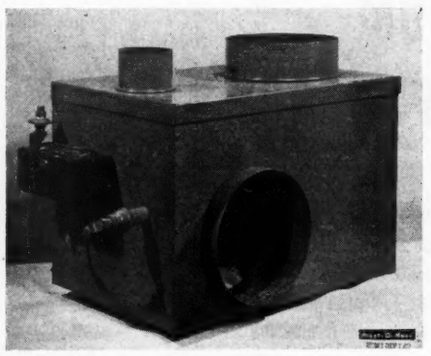
Distributed Exclusively in Greater N. Y. and Conn. by

VIN'S

Oil Burner Parts Supply Co.
3614 E. Tremont Avenue
New York 61, N. Y.

Humidifier Uses Stack Heat To Vaporize Water

A DOMESTIC HUMIDIFIER for use in either warm air or radiator heated homes, has been announced by The Presto Water Heater Mfg. Co., Hartford, Conn. The unit is installed in the smoke pipe and uses escaping heat in the stack to evaporate water which is automatically fed into



the unit. There are no restrictions in the unit to interfere with draft, according to the manufacturer.

The humidifier comes completely assembled and ready to mount on the smoke outlet of the furnace or boiler before the smoke pipe is attached. Actual water evaporating capacity will depend on the stack temperature at the outlet of the heating plant.

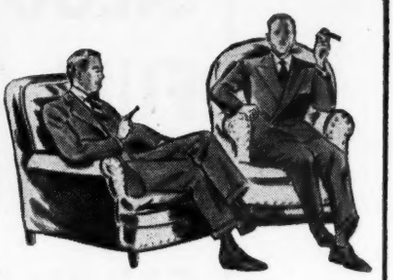
◈

Space and Water Heaters Introduced by Motor Wheel

MOTOR WHEEL CORP., Lansing, Mich., introduced a new line of space heaters and water heaters to distributors at three regional meetings recently. All are fired by the company's Duo-Therm Dual Chamber Bias Baffle vaporizing type oilburner.

The space heaters are styled like period furniture in Hepplewhite and Chippendale designs with low console outline. Also new is the "Sportsman" model for cabins, trailers and other space heating requirements of not more than 20,000 Btu per hour. Most models are available with "Power Air" unit, a package blower with a capacity of 300 cu. ft. of air a minute, which may be installed at either side or in place of the radiant doors on the front.

The company's new line of storage-type water heaters are finished in white enamel jacket over the insulated storage tank. The hourly recovery rate is equal to the capacity of the storage tank.



"Cast Iron, of Course!"

Real estate management executives who know say *cast iron* —whenever they are consulted on the best type of boiler for a new building or for replacement. For experience has taught them these important facts about cast-iron boilers:

They last longer — their cost per year is lower . . . they successfully resist corrosion and rust . . . they are sectional — easily installed and replaced . . . they are easily cleaned and maintained at low cost.

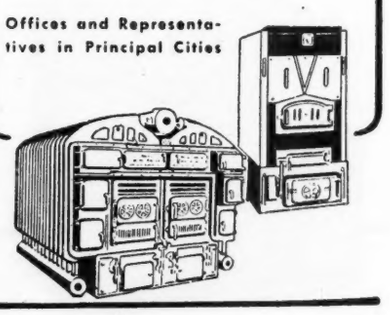
Men who know also agree upon H. B. Smith Cast-Iron Boilers as the leaders in the field. For every commercial, industrial, institutional or residential use, for all fuels and fuel-burning methods, they recommend them without hesitation.

Write for a free catalogue of H. B. Smith *Cast-Iron* Boilers. And specify them with confidence, always.

H.B. Smith
CAST-IRON BOILERS

THE H. B. SMITH CO., INC.
WESTFIELD, MASSACHUSETTS

Offices and Representatives in Principal Cities



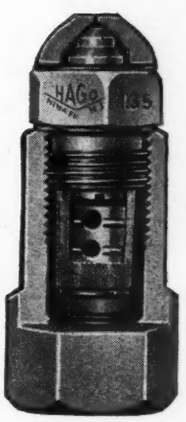
FORD TRUCKS LAST LONGER!

78% of All Ford V-8 Trucks Ever Sold Are Still in Use!

Ford

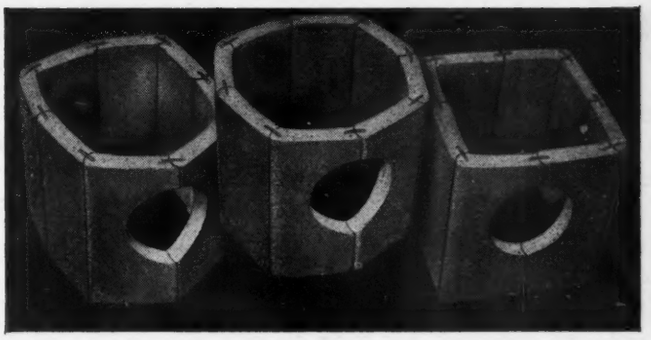
A NEW HOME FOR HAGO!

With larger and more modern facilities our production will be increased and we shall again be in a position to invite the inquiries of manufacturers and distributors.



AFTER JULY 15TH OUR ADDRESS WILL BE:

HAGO PRODUCTS
1281 SPRINGFIELD AVE.
IRVINGTON 11, N. J.



Now You Don't Need To Turn Down Jobs

No longer need you lose the profit on rush jobs because you don't have the correct shape of combustion chamber in stock. If you have one R & I Chamber of the size needed, it can be made round, rectangular or pear-shaped to fit any burner from 1 to 1.65 gals. of oil per hour. No cutting or fitting is needed.

Bonding clips hold sections together without cement. With every R & I Chamber there is enough Hearth material to make a 1½" thick floor and to cement around oil burner blast tube.

If your supply house can't furnish R & I Chambers, write us and also ask for Bulletin OB-96.

REFRACTORY & INSULATION CORPORATION

Manufacturers of Refractory Cements and Insulations for every condition since 1928.

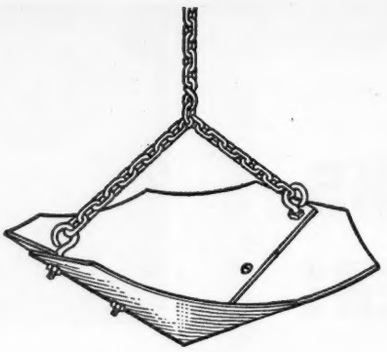
R&I

116 Wall Street, New York 5, N. Y.
Chicago 4, Ill. — Philadelphia 3, Pa.
Detroit 16, Mich. — Newark 2, N. J.

R & I Combustion Chamber

fuelsil oil heat

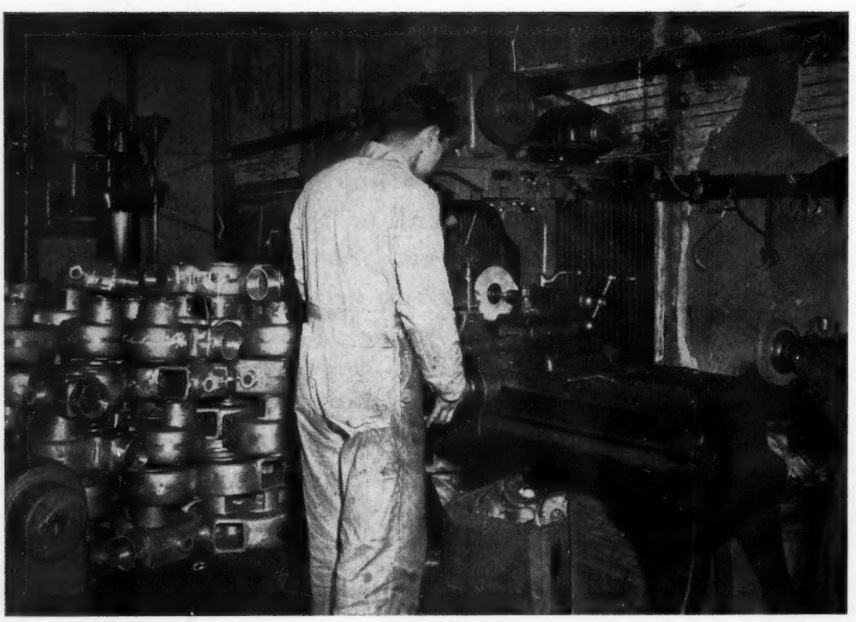
Has Stainless Steel Combustion Chamber Baffle



PETROLEUM EQUIPMENT MFG. CO., New Haven 6, Conn., manufacturer of Pemco stainless steel fireboxes, has announced a new stainless steel firebox baffle of the hanging type. This baffle is cone-shaped and hangs by chain over the combustion chamber, reflecting heat back toward the flame, and deflecting hot gases toward the heating surfaces.

Baffles are made in five sizes ranging in diameter from 12 to 24 ins. It is claimed they can be installed in fifteen minutes, and become red-hot very quickly after the burner starts. The manufacturer recommends the baffle for warm air furnaces and round boilers with short flue travel.

One Picture Is Worth Ten Thousand Words...



Silent-Flame Oil Burners are the product of 29 years of oil heating experience.

Models from 1 gallon-per-hour to 20 gallons-per-hour.

Standard Equipment.

Precision Built.

SILENT-FLAME MFG. CO., Inc.

2315-27 Westchester Ave. New York 61, N. Y.

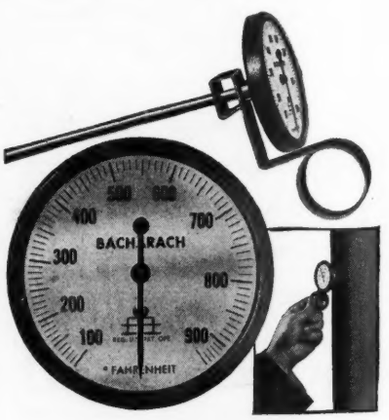
Magnifier Offered for Oilburner Nozzle Work

OILBURNER NOZZLE inspection is simplified by a new magnifier being offered by Gibson, Page Co., Rochester, N. Y. It is designed primarily for inspection of high pressure burner nozzle parts to find rough surfaces, or specks of sediment in the slots, swirl chamber or orifice.

The magnifier is made of shatter-proof glass, and is encased in a handsome copper frame with handle.

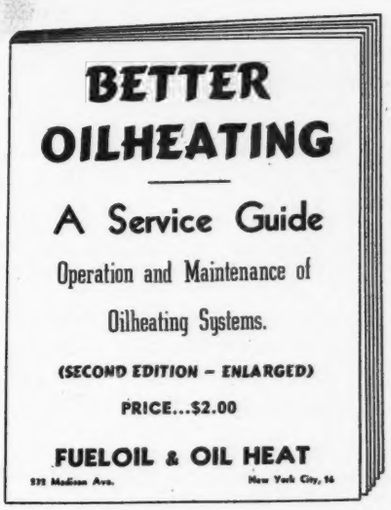
Bacharach Has Dial Type All-Steel Stack Thermometer

BACHARACH INDUSTRIAL INSTRUMENT Company is now producing an all-metal, dial-type thermometer for indicating temperatures from 100° to 950° F. It is provided with a slip-on handle which protects the operator's hand when the instrument is in portable use. The handle can be easily detached when the instrument is to be used as a permanently-mounted indicating thermometer.



Features claimed for this instrument include: Quick response to temperature change; all-metal construction which gives maximum protection against vibration, shock, and rough handling; precision bimetallic temperature element has no pivots, mechanical linkages, or gears and is stated to provide sustained accuracy within 1% of scale range; designed to withstand momentary over-scale temperatures within 10% of scale range.

2nd Edition . . . Enlarged!



A USEFUL REPRINT VOLUME OF THE BEST MATERIAL THAT HAS BEEN PRINTED

This collection of articles from Fueloil Journal, Air Conditioning and Oil Heat and from Fueloil & Oil Heat covers trouble shooting, field repair, and efficiency testing to save oil. It is a valuable book for individual study or as a supplementary text for service schools. For all dealers, service and installation men.

TYPICAL CONTENTS:

Fireboxes: First-Rate Fireboxes—Facts about Fireboxes—Hot Flames.

Draft: Solving Draft Problems.

Wiring: Locating Wire Defects—Handling Electrical Trouble.

Motors: Keep 'em Rolling (Parts I and II).

Controls: Principles of Electric Relays — Motor-Starting Relays — Electrical Test Benches.

Nozzles: Handling Nozzle Trouble—Bench Tests for Nozzles.

Pumps: Handling Oil Pumping Trouble—Service on 2-Stage Pumps—Service on Automatic Valves—Service on Pump Glands.

Baffles: Proper Baffles Save Oil—More Heat per Gallon.

Efficiency: What CO_2 Means—Brass Tacks of Combustion Testing—What? No Instruments?—Know CO_2 from IOU—Five Ways to Figure GPH Rates—Effects of Firing Rate on Cost.

Heating: Shortcuts to Heat Loss Data—It's all in the Venting.

Water Heating: Plenty of Water—Low Cost Hot Water.

Bound in heavy paper cover, 8½" x 11". Nearly 100 text pages and 125 illustrations besides numbers of tables and short service hints.

Price $2.00 per copy, *(We pay postage)*

Please send check, money order or cash with order to avoid bookkeeping on the thousands of small orders we must handle to service the field.

AVAILABLE ABOUT AUGUST 15th

(DETACH COUPON AND MAIL WITH CHECK OR MONEY ORDER)

FUELOIL & OIL HEAT
232 Madison Avenue,
New York 16, N. Y.

Send me ..... copies of "BETTER OIL HEATING." $..... is attached.

Name .....

Street .....

City .....State .....

Manufacturers Activities

Timken Meets With New England Dealers

TIMKEN SILENT AUTOMATIC entertained about 200 members of its New England dealer organization at an afternoon meeting during the Annual Exposition of Oil Heat Institute of New England. A short business meeting, addressed by T. A. Crawford, general sales manager, was followed by refreshments and an informal reception.

Mr. Crawford explained that dealers had been receiving no equipment in recent weeks due to the plant being closed. He said little material was available, and the plant had been closed to build up inventories to a point where production might be resumed on a reasonable scale.

"We expect to deliver as much by the end of September as we could have delivered by keeping the plant running at an uneconomic rate during this period of shortages," Mr. Crawford said. "No Timken dealer will lose a single burner due to the shut-down." He said the company probably would produce about a third of the annual normal year's production this year.

The meeting was under the direction of Larry Holman, New England manager, who introduced the speaker. Other Timken officials present were W. F. Rockwell, president; Ed Haugen, chief engineer; Bob Marberry, advertising manager; Frank Nowak, field representative; and Jack Williams, advertising representative.

Victor Furnace Sold

VICTOR FURNACE COMPANY, Salem, Mo., has been purchased by J. LeRoy Farmer, Cedar Rapids, Iowa. Mr. Farmer is at present owner of Canning Factories in Iowa, a large hemp mill in Beaver Dam, Wisconsin, and operates several farms near Cedar Rapids.

This is Mr. Farmer's first venture in the furnace business, but he has engaged C. M. Selby, Michigan, as General Manager of the business. Mr. Selby has had many years of experience in the furnace business as production manager, sales and development. Mr. Selby has already located in Salem, and takes over management at once.

The same personnel will be retained at the plant, and the new owner will manufacture Furnaces, Septic Tanks, Oil Supply Tanks, etc., and do general installation work as well as manufacturing.

Gulf Starts Exploration For Oil With "Flying Eye"

A NEW ERA of oil exploration, in which the underground structure of the earth's most inaccessible ocean, jungle, and mountain regions may be "mapped" from the air, has been ushered in by Gulf Oil Corp.

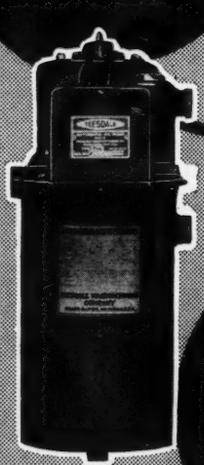
The new development—transformed during the war into a secret weapon for defeating enemy submarines—is expected to speed-up discovery of the world's remaining uncharted oil resources.

The "flying eye," or airborne magnetometer as the device is technically named, represents the first practical means of oil surveying from the air; the fastest known means for securing geophysical prospecting data of any kind, and probably the cheapest.

In preliminary oil surveys, it gives a continuous magnetic chart, in grid style, over hundreds of miles of difficult terrain

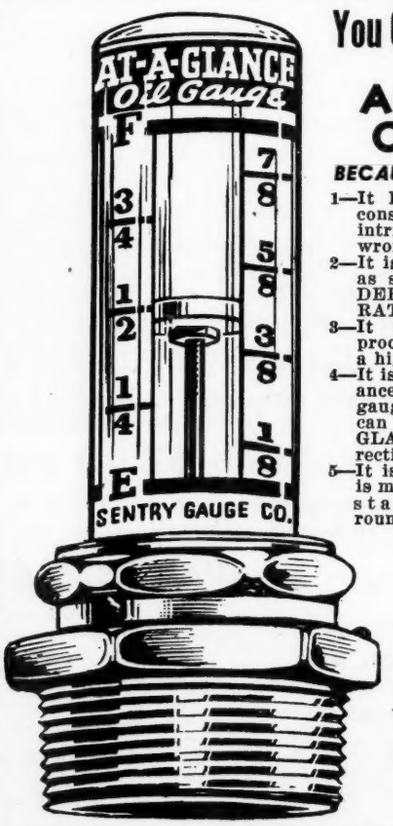
Heart-Beat of the Burner's Oil Flow

RECOMMEND
The Automatic
T.U.X.
OIL PUMP



Capacity:
30 Gallons per Hour
Self-Priming
Trouble-free
Silent and Leak-proof
Vapor and Oil Tight
All Parts
Interchangeable

TEESDALE MANUFACTURING CO.
427 MARKET AVE., GRAND RAPIDS 3, MICHIGAN



You Can't Go Wrong
WITH AN
At-a-glance
Oil Gauge

BECAUSE

1—It has a simple sturdy construction—no gears or intricate mechanism to go wrong or wear out.
2—It is approved and listed as standard by the UNDERWRITERS LABORATORIES, INC.
3—It is guaranteed leak-proof, built to withstand a high pressure.
4—It is attractive in appearance, and is the only gauge on the market that can be read "AT-A-GLANCE" from any direction.
5—It is easily installed and is made in sizes to fit any standard. Horizontal, round or vertical tank.

AT-A-GLANCE GAUGES

Can be purchased from jobbers throughout the United States and Canada.

KRUEGER SENTRY GAUGE COMPANY
1056 West Mason Street Green Bay, Wisconsin
Write for complete details today.

in a few hours, where ground prospecting might require weeks or months.

It introduces the only means of magnetic prospecting over water.

Research on this instrument, basically a magnetic detector which could be airborne, was begun in Gulf research laboratories in 1940, and a successful test flight made in early 1941. Then fate altered its use from a tool of production to a war weapon.

◈

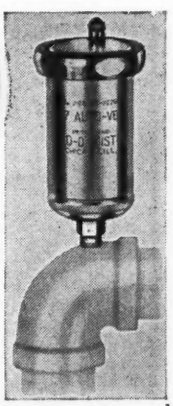
Air Shipment Sends 180 Burners to West Coast

A FLYING BOXCARLOAD of one hundred eighty HomEase domestic oilburners left Newark Airport, June 21, aboard a Douglas DC-4 Skymaster liner for Seattle, Wash., where they are urgently needed to complete unfinished homes. The oilburners, complete units, ready to install, are the product of the HomEase Products Division, Inc., of the Bogue Electric Co., Paterson, N. J. They were flown to McKay Appliance Co., Seattle, by California Eastern Airways, an aircargo company.

E. P. Schinman, president of Bogue Electric Company, said that the shipment was being made by air to permit the completion at the earliest possible moment, of homes being built for returning servicemen. The plane load of burners, he said, represents the largest single shipment made by Bogue since the concern's reconversion of its facilities to peacetime production.

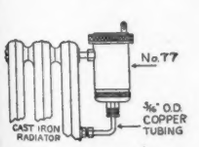
And Keep It Out With

AUTO-VENT AIR ELIMINATORS



Circulation Troubles?

Don't fight air pockets or traps in hot or cold circulating lines! "Get that air out of there" *and keep it out* simply by installing the No. 7 Maid-O'-Mist Automatic Air Vent. This reliable air vent has a self-closing float-controlled valve and is designed especially for circulating pipe lines, convector radiators, unit heaters, cooling manifolds, tanks, diesel engines, or any other application where air pockets or traps retard the free circulation of liquids. For pressures up to 75 lbs. Bright brass finish.



Venting Cast Iron Hot Water Radiator

PLAY SAFE—USE ONE ON EVERY JOB

MAID-O-MIST INC.

3221 NORTH PULASKI ROAD
CHICAGO 41 ILLINOIS

AUTOMATIC HUMIDIFIERS FOR ALL TYPES OF HEATING SYSTEMS

MONARCH BURNER

ACCESSORIES AIR CONES and STABILIZERS:

Proper air-oil mixture is essential for efficient burner operation. Proven Monarch Air Mixing Equipment is again available for 3½", 4", 4¼", 4¾" and 6" I.D. Air tubes—No restriction on quantities and immediate shipment of small orders.

STAINLESS STEEL NOZZLES

Production is at the highest rate in our history, but quantity orders must be placed well in advance of required delivery dates. *Emergency orders for one or two nozzles are being shipped immediately.*

Write for Catalog D

MONARCH MFG. WORKS, INC.

E. WESTMORELAND & SALMON STS., PHILADELPHIA 34, PA.

New Taco Price Sheets

NEW WHOLESALER'S price sheet gives net costs on all Taco products after the recent increase just allowed by O. P. A. to partially meet higher manufacturing costs.

All unshipped orders placed prior to June 7, 1946, will be billed at prices in effect at the time of shipment. This is in accordance with Taco's Sales Policy as published in previous price sheets.

The backlog of orders on hand for Domestic Taco, Multi-Coil Taco and Tankless Taco Heaters as well as Taco Hot Water Specialties is still very large. However, they can ship most Factory Shipment Items 5 to 6 weeks after receipt of order.

Evans Manual Released

DISTRIBUTION of the Evans 1946 home heater and water heater service manual is announced by C. C. Van Wagoner, Service Manager of the Heating and Appliance Division of Evans Products Company, Detroit. Copies of the manual are available to all distributors and dealers at a small nominal fee.

The 46 page manual, bound in blue leatherette and illustrated with 82 photographs and illustrations, contains, in addition to sections on installation and servicing, chapters on the basic theory of combustion, causes and corrections of heat losses in homes, methods of determining heat loss, functioning of chimneys and drafts, and a chart of United States climatic conditions. The climatic chart lists average, lowest, and design temperatures, and prevailing wind direction and average velocity in each state.

Sinclair Starts Schools

SINCLAIR REFINING COMPANY is conducting this summer a series of three-days schools for its sales personnel, covering fueloils and their application to modern oilburners, at the East Chicago Burner Laboratory of this Company. The sessions are organized by Fred V. Anderson, fuel-oil manager, and Al Golnik, combustion engineer, and include a study of the latest developments in electric controls and a visit to the Underwriters Laboratory in Chicago, where oilburners and space heaters of all types are constantly being tested.

Sundstrand Wins Safety Award

SUNDSTRAND MACHINE TOOL COMPANY has been awarded the Liberty Mutual Insurance Company's Accident Prevention Flag in recognition of its outstanding achievement in preventing accidents in their plant. Presentation ceremonies were held at a meeting of the Sundstrand Safety Committee.

For three years, 1942 through 1945, this plant held its lost time accidents at a point 53% better than average for the machine tool industry.

Much of the credit for this record is due to the enthusiastic cooperation given by the employees to the policies of the Safety Committee.

Tells Suppliers With Music

GLOBE EQUIPMENT and Supply Co., New York, has circularized its suppliers with music and a plea for help. The music—and the text of the letter—says "I've Got Plenty of Nothing." The text further asks for "at least something to keep me going" and ends with the hope the manufacturer can make his reply "sound like sweet music."

Parakem
SLUDGE REMOVER
FOR GREATER PROFITS!
The Fuel Oil Conditioner Backed By More Than 100,000,000 Gallons of Fuel Oil Experience

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VIKING PUMP COMPANY
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Brown Buys 5-Story Philadelphia Site

IN PREPARATION for physical expansion, the Brown Instrument Co., Philadelphia, has made outright purchase of the five-story and basement structure at 2221 North Broad Street.

The Brown division of Minneapolis-Honeywell Regulator Company leased the 57,000 square feet of floor space at the North Broad Street address last summer, immediately using the site for storing materials and supplies.

Opens N. Y. Terminal

GEM OIL CORP., Flushing, N. Y., opened a new bulk fueloil terminal June 28, 1946.

This newly formed organization is an affiliate of the Filtered Fuel Oil Corp., Brooklyn. The president of the new corporation is Leon A. Serota and the treasurer and secretary Samuel H. Krone.

The plant embodies the very newest in mechanical construction of what a most efficient fueloil terminal should contain. Designed, primarily, for speed and efficiency some of the newest devices include deep well pumps capable of loading trucks at over 4,000 gallons per minute. The meters are equipped with set stop devices which enable automatic loading at prearranged gallonages. The dock facilities to provide for incoming fueloil barges are the largest in the entire Flushing area.

The products to be handled include kerosene, No. 2 fueloil, industrial distillate No. 5 fuel, and both premium and regular gasoline. For the present, storage capacity is one and one half million gallons. However, there is ample space on the property to provide for an additional 5,000,000 gallons storage.

Gem Oil Corporation as Filtered Fuel Oil Corporation will be operated to serve a strictly wholesale business.

May Joins Plants

GEROTOR MAY CORPORATION, manufacturer of air and hydraulic units for industrial applications, announces the consolidation of its Logansport, Ind., plant with its main plant in Baltimore.

This consolidation involves the transfer of Gerotor May's entire Air and Hydraulics Division to the Baltimore plant, where expanded facilities are available and where centralization of all engineering, production and sales activities will result in increased efficiency.

New Petco Folder

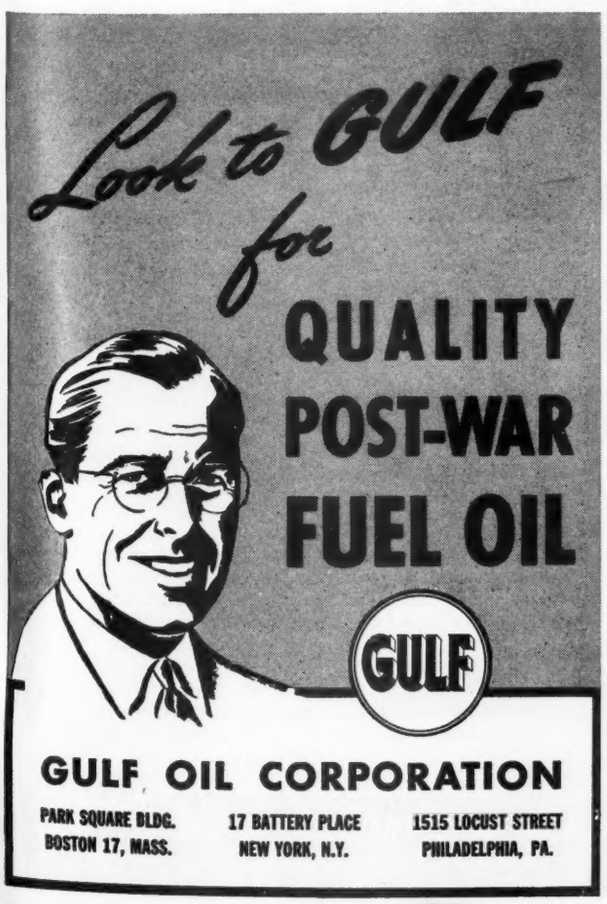
B. A. PETERSON CO., Dowagiac, Mich., has issued a new folder on the Petco interlocking combustion chambers for domestic oilburners. The chambers are made in round vertical and rectangular types with interlocking sections that ease installation. The company also makes combustion chamber baffles.

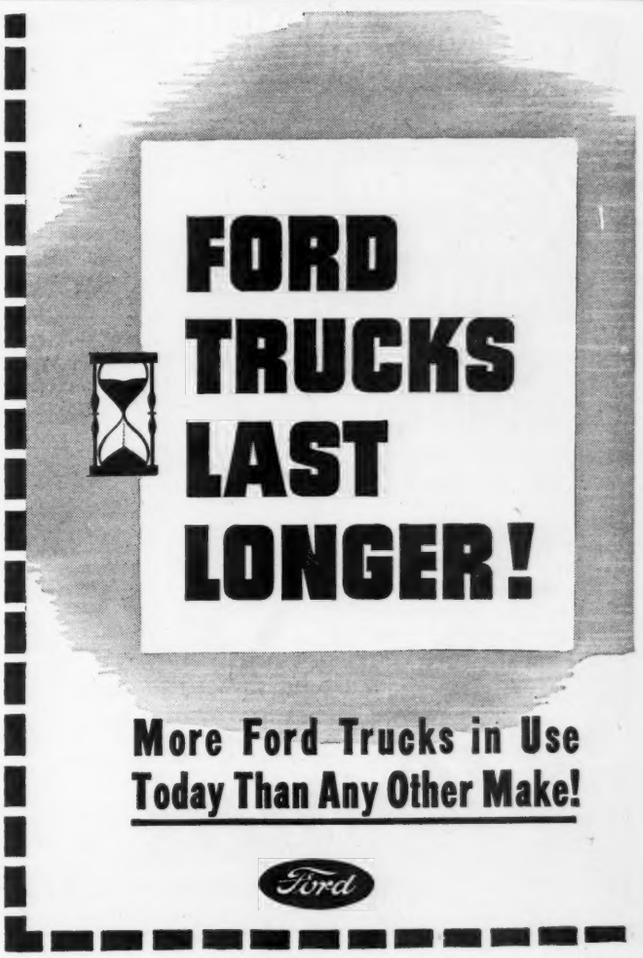
◈

A. P. McGlynn, president of McGlynn Oil Co., Minneapolis, and a prominent member of the local oil industry, died June 6.

Harold C. Hickock has been named Central District manager of the B. F. Sturtevant Company division of Westinghouse, with headquarters at Pittsburgh.

A. A. Sadley has been named a vice-president of Hajoca Corp., Philadelphia. Mr. Sadley joined the company in 1907.





Wiring for Hot Water

(*Continued from page 46*)

article. It is a reverse-acting boiler temperature control which certain installations need, since without it the tanks may become cold occasionally, for example on cold mornings when setting up the room thermostats causes the circulators to run steadily for an hour or two and when at the same time there is a heavy demand for hot water from the tank.

With Control 4 in the circuit, but without Control 5, setting up the room thermostat when the boiler is below 165° causes the oilburner to start at once—but under these conditions the circulator remains idle until the boiler temperature is increased to 165° by operation of the oilburner. Only after that does the circulator start. The reason for this is, of course, that reverse-acting Control 4 was installed to keep the circulator from operating until the boiler temperature was above the point for which this control is set.

On actual installations, when this did not interfere with providing a good supply of hot water, it was found desirable to start the circulator with the oilburner when the room thermostat called for heat. This gave steadier heat during mildly cold weather by eliminating flooding the radiators with boiler water at about 165°, reduced the oil consumption by permitting heating the house most of the time with lower boiler temperatures, and gave heat to the radiators more quickly after the room thermostat circuit closed. Therefore Control 5, a reverse-acting tank temperature control, was installed to cancel out the action of Control 4, whenever the hot water tank is warm enough and therefore there is no disadvantage in starting the circulator simultaneously with the oilburner. Thanks to the action of Control 5, Control 4 prevents the circulator from chilling the boiler only when the boiler should not be chilled. That is, when the tank is warm enough as it generally is in winter, Control 5 shunts Control 4 and renders it ineffective; but should the tank occasionally be in need of heat from the indirect water heater, Control 5 would be in its "off" position, and Control 4 would prevent the circulator from starting and chilling the heating boiler and indirect water heater. Rarely is the action of Control 5 needed, since any chilling of the tank causes Control 3 to start the burner. The way it works out on actual installations, Controls 4 and 5 permit use of a small flame for a heavy heating load. With a heavy heating load and a low firing rate, even with the burner in operation a few minutes because the tank control has started it, cutting in of the circulator could chill the boiler unless Control 4 prevented this. Control 4 should prevent this when Control 5 is cool, in its "off" position, because the tank is cool. This boils down to making a "preferred load" of the hot water tank whenever the burner is unable to keep the boiler temperature high with a heavy heating load and a heavy water heating load on the boiler.

To gain the reverse-acting features of Controls 4 and 5, actually only one extra control has to be installed. That is Control 4. The action of Control 5 is obtained by using a tank temperature control which has two separate 110-volt mercury tubes. With this control cool, one mercury switch is in the "on" position and is the equivalent of Control 3 in Diag. 3, but the other mercury switch in the same

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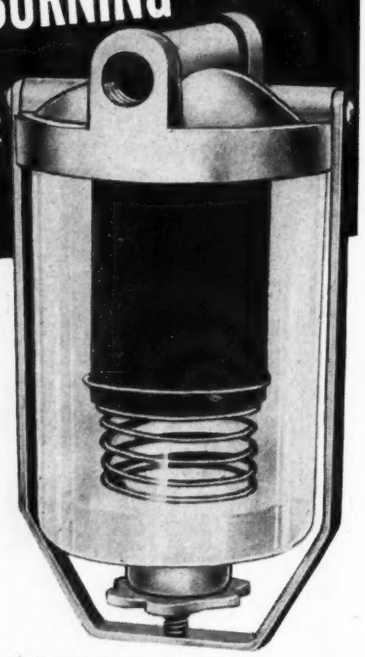

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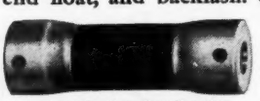

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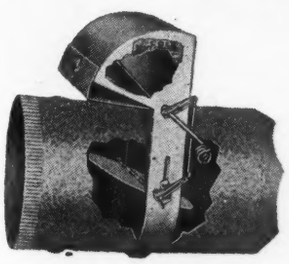

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fuel oil / oil heat

control is in the "off" position and is the equivalent of Control 5 in the diagram. When the tank temperature control reaches 120°, it snaps to the other position and gives the effect of opening Control 3 and closing Control 4 in the diagram.

In adjusting an installation using the control wiring of Diag. 3, Controls 1 and 2 are set high as indicated so that the boiler temperature will reach its practical peak when a great deal of hot water is needed. The boiler temperature will be at that peak only when hot water is needed. In summer, the aim is that the tank will be well heated after Control 3 snaps "on," and following one "on" period of the burner there will be no firing of the boiler for eight to twelve hours. The serviceman should place either Control 1 or 2 in normal use by setting it below the other control by about ten degrees; one control should definitely be used for standby and ultimate safety. A complete check-up on the job calls for testing the operation of both controls, of course. The tank temperature control, Control 3, usually is set at about 120° or 125° as this gives hot enough water from the faucets, the top of the tank being hotter than the control which is halfway down the side of the tank. Avoid setting this control needlessly high, so that it does not go to its "on" position frequently and stay there many hours a day. As Controls 3 and 5 are really one control, as has been covered, there is no separate adjustment for the Control 5 shown in the diagram. Control 4, the reverse-acting boiler temperature control, seldom is called into action but should keep the boiler from chilling when this protection is needed. Good results come of setting this control between 150° and 170°. Set it at 150° usually; should this result in the tank's ever becoming cold, set it higher and higher until you reach the peak of 170°. If the hot water tank still becomes cool at times, probably the indirect heater or the tank is too small for the hot water load, the coil of the indirect water heater is plugged, or the trouble is caused by some similar shortcoming which has nothing to do with the adjustment of the controls.

Three limit controls really can give the action of Diag. 3, and certain dealers are taking advantage of this possibility. They provide only one high limit control, instead of provide two in series as Diag. 3 shows. They install one tank temperature control, with two mercury switches to give the action of Controls 3 and 5 in the diagram, as has been covered. They install one reverse-acting control on the boiler, as Control 4 in the diagram. Safety is somewhat reduced obviously by using only one high limit control, but these dealers justify this by pointing out that this control does not start and stop the burner all the time, for ordinarily when maximum boiler temperature is not needed the burner is held idle by other controls. Simplifying Diag. 3 to include only three limit controls instead of the five shown in the drawing brings out the point that once dealers learn these special layouts they often find ways to reap the original valuable advantages, still cut job costs to rockbottom.

Dealers are not urged to start at once to use these special, more economical control layouts for every installation they make. To be practical, it is recognized that right now controls are hard to get. Still, the farsighted dealer does well right now to become familiar with such special lay-

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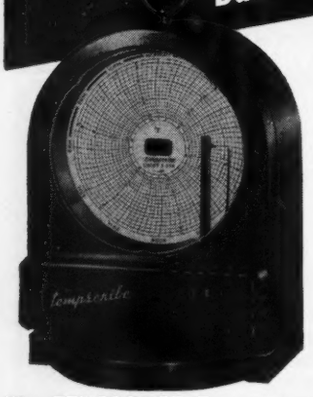

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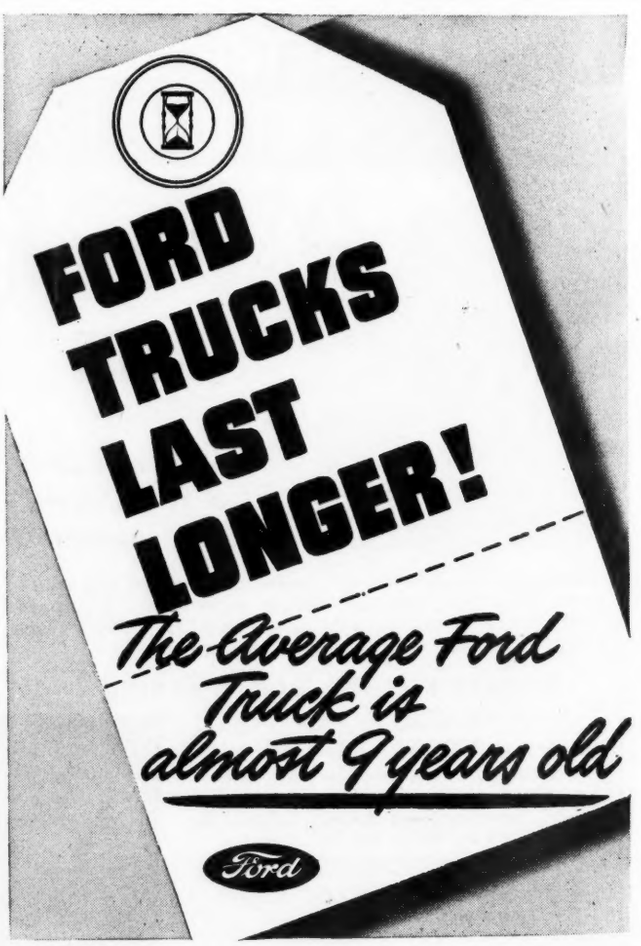

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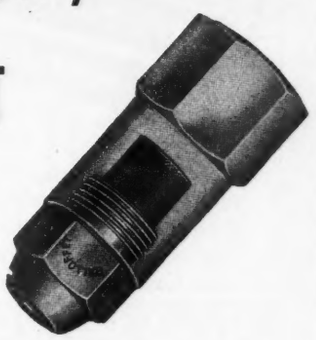

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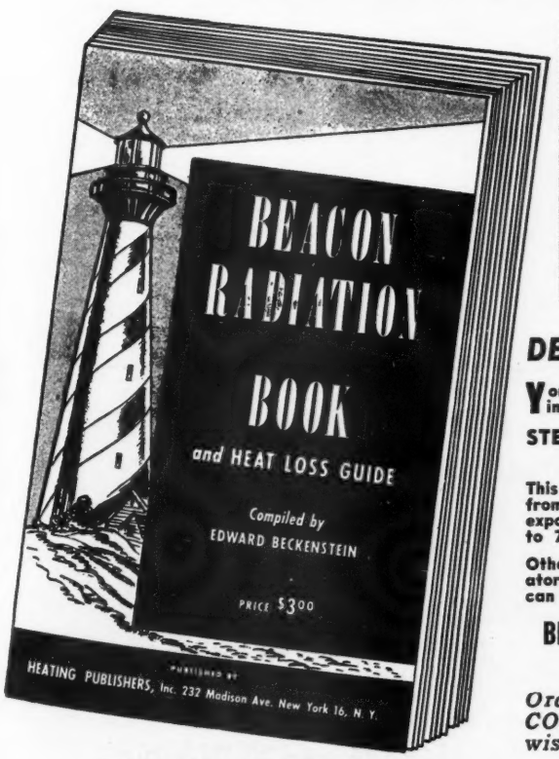

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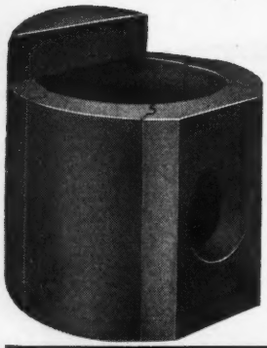

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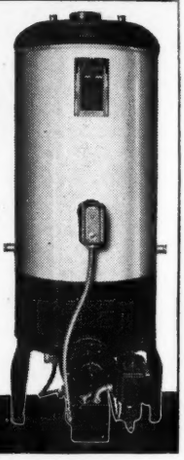
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outs as are shown in Diag. 3. He should learn the principles and the actual wiring to make certain that where the best oilheating is demanded he can provide it. There is no better way to become familiar with latest advancements than to install a few burners, for check-ups on performance and fuel economy, rigged to perform just as well as oilburners can possibly perform. After all, cutting summer oil consumption in half and reducing fuel bills during the heating season by 10% to 15% are good ways to set oilheating one additional jump ahead of competitive fuels.

◈

Housing Approvals Mount

(*Continued from page 47*)

had controlled only mills with output of 8,000 ft. per day or higher. These small mills produce annually about four billion feet.

On June 8 NHA released the results of a survey of married enlisted men who were discharged from service last December, showing that up to the present three-fifths of them had been unable to find suitable living quarters for their families.

Among the two-fifths who found places to live the rents were much higher than they had said they could afford, in a check-up at the separation centers.

Asked what rents they could afford, 28% replied less than $30 a month, 33% between $30 and $40, 23% between $40 and $50, and 16% $50 and over. Considering that a $50 rental is about equivalent to owning a $6,000 house, and that only 16% feel they can afford that scale, how are veterans going to handle the two-thirds of houses so far authorized at $6,500 or over. Chances are that other people will get these new houses, and the veterans will get their old ones.

On June 12 CPA's Direction 12 to M-21 channeled steel products to housing and agricultural uses by setting up a top priority system through the use of certificates that the manufacturer extends to his steel mill. The original intent is that this will be effective only until October 1, by which time steel mills are expected to resume full scale output. The specific items for housing that are blessed by the order are pressed steel bathtubs, sinks and lavatories, warm air furnaces and floor furnaces, convectors, furnace pipe and fittings, registers and grills. A few days later CPA announced that it was working on a similar order for cast iron, and that when issued this will apply to soil pipe and fittings, heating boilers for residences, bath tubs, sinks and lavatories, closet bowls, radiation and pressure pipe and fittings.

Priorities Amended

On June 14 CPA's PR 33 (as amended) was issued. It pretty much covers the priority system set up for housing, the HH program. One interesting section stipulates that after buying a house built under HH priorities with a specified sale price the buyer may not resell the house at a higher figure until such date as the Veterans Emergency Housing Program will have been terminated. A similar provision covers renting. This idea looks at first glance as about impossible to enforce on a broad scale.

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HAND CRIMPING TOOL

IT CUTS AND STRIPS AND ALSO CRIMPS
Rajah Terminals to ignition cable without the use of solder or any other tools
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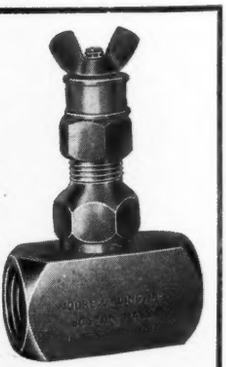
Fusible Line Valve
A combination shut-off valve and fusible link for oil burner installations. Self-contained automatic type—no chain, pulley, hook or weight required. Held open by fusible device against a spring. Can be manually operated—horizontal or vertical position.
Globe type valve made from brass bar stock, metal to metal seat and disc construction. Easily installed—no adjustments required.
Made in ⅜", ½", ¾" and 1" sizes.

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A PRODUCT OF STEWART-HALL CHEMICAL CORP., MT. VERNON, N. Y.

Additional Fueloil Grade

(*Continued from page 40*)

troleum and coal. The technological gap between producing a controlled chain reaction, such as was used in the atomic bomb project, and using the reaction in a large scale power plant has been said to be comparable to the gap between the discovery of fire and the manufacture of a steam locomotive. At the earliest, scientists believe atomic energy might be made available for industrial purposes within the next decade, and the question will then be whether it can compete on an economic basis with coal, petroleum or water power. Few now living are likely to drive automobiles or fly jet planes powered by atomic energy."

In the section of his talk dealing with oil costs, Barrett had this to say, ". . . petroleum products, brought from miles down in the earth, refined by complicated processes and transported hundreds . . . even thousands . . . of miles, are available to us in this country at less cost than milk or common carbonated water. No other nation enjoys so low a cost."

The Association's president, Charles H. Bruett, endeavored to impress on the membership the importance of recognizing that the real postwar period is about to begin, the period in which we resume active competitive operation. He pointed out that for four years the industry has done no selling, but that selling is definitely here today; that with margins fixed, operating costs are nonetheless mounting rapidly, calling for the quality of management that the industry displayed in the difficult wartime years. "After what we've been through since 1941," he said, "there is no question of our ability to handle what lies ahead if we will recognize now that we are facing a stiff job . . . what with growing gas competition, more competitive oil activity, and operating problems totally different from what we had before the war."

H. B. Van Cleve, president of Maritime Petroleum Corp., New York, discussed the function of a trade association in the postwar years. This particular association, he explained, has been successful. It has 300 out of 825 fueloil marketers in the state as members, but those 300 do about 75% of the total volume. During the war it was easy to think and act as a group . . . it was the herd instinct in time of stress; all members made investments of money, time and effort, and received dividends in guidance and understanding on wartime problems.

"But now," he continued, "we must have something else if we are to justify what we spend to support an association. We all need a lot of help on problems, and much of it is the kind of help that we can only get through a group activity. The large companies have skilled specialists on marketing activities, on pricing problems, on competitive and public relations angles; no small company can afford these, but we can through cooperative effort learn a lot from each other through research and analysis . . . sharing our experiences until we learn the best way to do things.

"The principal weakness in the independent fueloil distributing organization is that it is planned for a single lifetime, the lifetime of the boss. The bosses in our industry are middle aged; they're inclined to want to enjoy the fruits of their work

- Low water cut off and pressure control in a single unit.
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Eastern Products Company

FORDS, NEW JERSEY

without worrying about long range perpetuation of the business, but if we continue to follow that course we are not going to be able to meet our future responsibilities to our customers, our suppliers and to ourselves." Van Cleve proposed the appointment of five small committees within the association, each to actively undertake one of the five general projects that he listed as follows:

1) Inaugurate cost studies: terminal, transportation, sales, service and administrative. 2) Study technical problems, such as oil changes, burner changes., etc., to remedy the present long delays in getting to understand such factors as they come to light. 3) Undertake market research of the consumer type; do public relations work, perhaps cooperative advertising; learn what the public wants in burner service. 4) Employ and work with a labor relations counsel and negotiator in the spirit of preparedness, not aggression. 5) Explore and understand legislative and government expansion into our industry, feeling that we are getting closer to government and need to know promptly how we're to be affected.

A. J. McIntosh, head economist for Socony-Vacuum, New York, was the closing speaker with a chart talk on the economics of the fueloil industry in the state of New Jersey. High spot paragraphs were:

"Next year we expect the demand for light home heating fueloil in New Jersey to exceed the record high established in 1942, and by 1950 our estimate is that this market will be twice as large as it was in 1937. Other estimates we have heard about would indicate a greater increase but we have been conservative, not in the matter of number of burners nor in the percentage of homes which we estimate will be heated by oil, but principally in the consumption per burner per year. We believe that this average consumption per unit will decline for many reasons. We look for smaller homes with better insulation, more storm windows and weatherstripping.

"Heating requirements for residual fueloil should follow the general trend indicated for distillates and may reach a figure in the neighborhood of five million barrels in 1950. The use of residual fueloil by the gas and electric plants had started down prior to the war. We look for a use after the war at about the 1941 level, but this may be high if natural gas is piped into the area."

McIntosh pointed out that domestic oilburners operating in New Jersey at the start of 1935 were 115,603; at the start of 1945 were 220,771; at the start of 1950 are expected to be 346,777. Percent of total New Jersey homes that were heated with oil in 1935 was 16.2; in 1945 this was 26.1%, and in 1950 is expected to be 37.6%. Average gallons consumed per domestic burner in 1937 was 2,201; in 1945 was 2,016; estimate for 1950 is 1,953 gallons.

The Association's board of trustees was enlarged by the election for three year terms of J. F. Hoff, Jr., J. M. DiBella, H. Renoff and W. Hedden. Carry-over trustees are E. Studerus, L. E. Marron, H. E. Stahl, Jr., I. T. Sickley, W. L. Yeomans, C. E. Scruggs, and V. P. Brady. Officers are C. H. Bruett, president, J. F. Hoff, Jr., vice-president, W. G. Harnisch, treasurer, S. C. Craig, secretary, and A. W. Rich, executive secretary.

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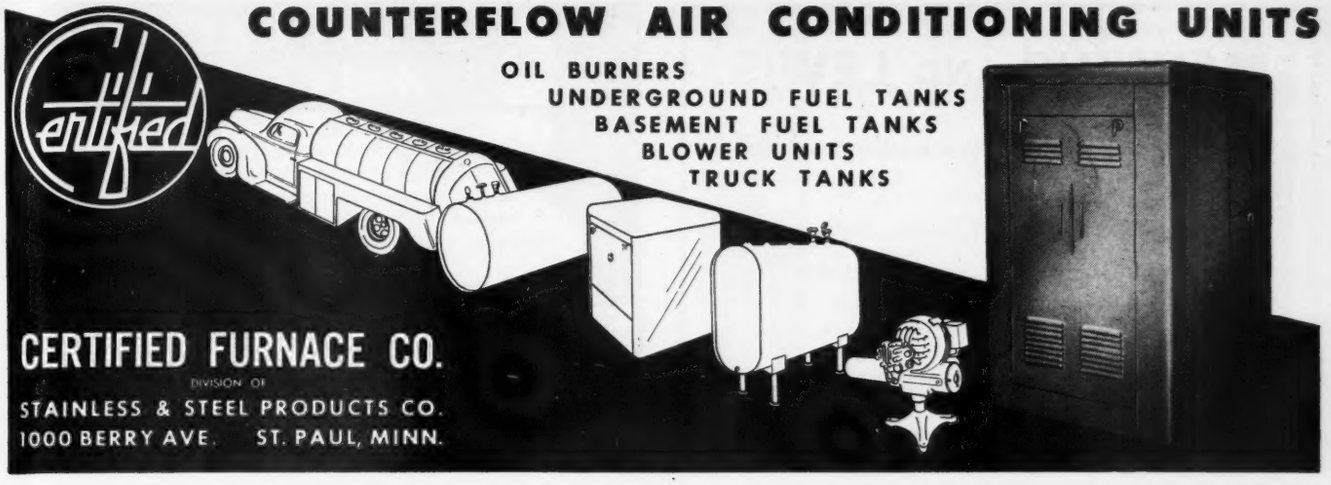


DEGREE DAY TABLES

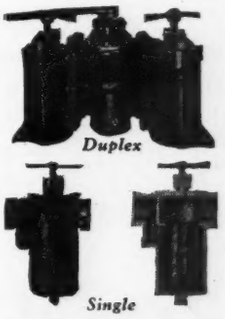
ONE MONTH ONLY — May Normal	May 1945	May 1946	Percent Change*		SEASON TO DATE (Sept. 1 to May 31) Normal	1945	1946	Percent Change*
221	360	312	+41.1	Albany	6587	6871	6778	+ 2.8
32	106	19	—40.6	Atlanta	2999	2807	2753	— 8.2
99	135	73	—26.2	Baltimore	4509	4296	4016	—10.9
248	313	237	— 4.6	Boston	5853	5703	5710	— 2.4
351	447	312	—11.1	Buffalo	6805	6675	6460	— 5.0
259	352	264	+ 1.9	Chicago	6205	6211	6086	— 1.9
139	196	99	—40.4	Cincinnati	4993	4932	4410	—11.6
255	349	242	— 5.3	Cleveland	6094	6050	5659	— 7.2
14	32	18	+28.6	Dallas	2378	2232	2103	—11.5
271	253	405	+49.4	Denver	5784	5614	5502	— 4.8
165	310	251	+52.1	Des Moines	6356	6185	6118	— 3.7
252	397	273	+ 8.3	Detroit	6502	6295	6088	— 6.3
263	445	278	+ 5.7	Grand Rapids	6655	6474	5941	—10.7
216	292	262	+21.2	Hartford	6037	6114	6168	— 2.1
409	431	458	+11.9	Helena	7600	7777	7058	— 7.1
12	11	0	..	Houston	1333	1163	1188	—10.8
155	287	188	+21.2	Indianapolis	5549	5407	5337	— 3.8
106	211	136	+28.3	Kansas City	4971	4727	4362	—12.2
104	110	126	+21.1	Los Angeles	1362	1512	1417	+ 4.0
92	171	89	— 3.3	Louisville	4421	4342	3926	—11.1
340	461	385	+13.2	Milwaukee	6955	6926	6991	+ 0.5
255	403	320	+25.4	Minneapolis	7898	7563	7666	— 2.9
1	0	0	..	New Orleans	1208	1072	1166	— 3.4
176	204	154	—12.5	New York	5270	4952	4885	— 7.3
152	266	198	+30.2	Omaha	6074	5914	5572	— 8.2
117	192	113	— 3.4	Philadelphia	4732	4844	4878	+ 3.0
170	284	183	+ 7.6	Pittsburgh	5427	5631	5284	— 2.6
375	480	415	+10.6	Portland, Me.	7128	7375	7572	+ 6.2
241	202	167	—30.7	Portland, Ore.	4214	4043	3830	— 9.1
245	250	206	—15.9	Providence	5946	5552	5668	— 4.6
88	204	120	+36.3	St. Louis	4602	4758	4342	— 5.6
233	202	252	+ 8.1	Salt Lake City	5568	5568	5640	+ 1.2
252	295	308	+22.2	San Francisco	2569	3043	3113	+21.1
485	626	548	+12.9	Sault Ste. Marie	8901	8759	8778	— 1.3
304	205	176	—42.1	Seattle	4560	4144	4422	— 3.0
226	394	268	+18.5	Toledo	6202	6485	6079	— 1.9
104	149	77	—25.9	Washington	4582	4527	4028	—12.0

*Compared with normal.

KRAISSL
FILTERS
STRAINERS
PUMPS
Keep Fuel Oil Lines Open and Active

Year-in, year-out performance proves the skill of KRAISSL engineering design and the honesty of KRAISSL manufacture.

Class 72 Strainers and Filters



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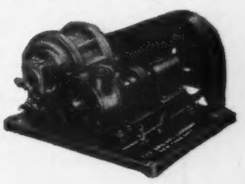

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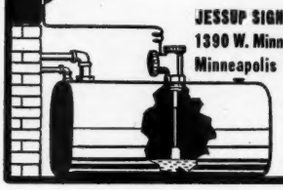

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SIZE OF GAUGE 5" x 5"

THE LIGHT WILL GLOW WHEN YOUR OIL IS LOW
Jessup
OIL TANK WATCHMAN

New England OHI Holds Exposition

(*Continued from page 43*)

Paul Ryan, long a prominent figure in the petroleum industry, delivered one of the most controversial talks of the convention, and started a chain of discussion that carried over to the golf course and verandas of the post-show outing. He called for integrated service to the customer that would eliminate annoying charges for oilburner service. He advocated a retail price for oil that would allow the dealer to keep equipment in good operating condition, and an end to "extras" that made customers conscious of expense.

"Our competition uses our methods against us," Mr. Ryan said. "They claim their service is free, though every thinking person knows that service expense is included in the price of the fuel. People don't know or care what price they pay for fuel as long as the service is satisfactory, and the total price is reasonable. There isn't a man in this room who knows what his average cooking gas bill is, or the average rate he pays for electricity. The bills are reasonable, and the service is satisfactory. We pay them without question, and our customers will pay their fueloil bills the same way if we give them the kind of service they expect."

Mr. Ryan also advocated a refinery price for distillate heating oils that would bring them to a parity with gasoline at the plant. This, he pointed out, is the only way to assure a continuing and satisfactory supply of burning oils, and make refiners produce them in the volume we need. "Distillate heating oils are a major petroleum product," he declared, "and they cannot be produced and sold in the volume we want as a subsidized by-product of gasoline."

This view was opposed by Walter F. Rockwell, president of Timken-Detroit Axle Company, parent of Timken Silent Automatic. He demanded that the industry produce the best oilburning equipment possible, and that such service as is necessary be rendered by dealers at a fair charge. Good equipment, installed by competent, trained men, will not require service that will be objectionable, he said.

"We should demand and get from refiners oils that will burn satisfactorily in our equipment, and at a lower price," Mr. Rockwell continued. "We shall continue to improve our equipment, as every progressive industry does, but it is up to the oil refiner to produce the products we need."

Mr. Rockwell pointed to the crippling effect of governmental interference in the economic affairs of industry; to 3,400 strikes per year since the enactment of the Wagner Act; to the folly of freezing prices and encouraging increases in industrial costs, and similar political attempts to regulate the affairs of business.

Dinner speakers included entertaining talks by Bill Cunningham, columnist for the Boston Herald; and H. R. Knickerbocker, foreign correspondent.

A stag outing, run in conjunction with the Old Timers Club, on Friday concluded the festivities. The affair was attended by Governor Tobin of Massachusetts who was discovered on the golf course and brought in to fulfill the speaking engagement he had been forced to miss on Thursday evening at the Annual Banquet.

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"Everything for the Oil Burner Trade"

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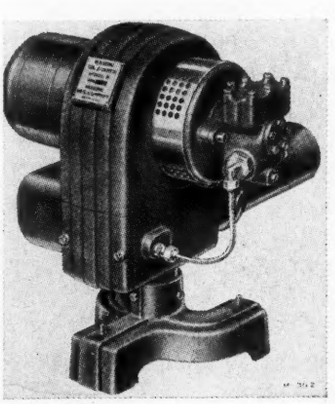

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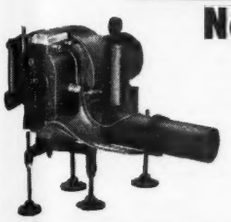

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Oilheating Trends

(*Continued from page* 11)

installations, other than conversion oil-burners, were stopped for old homes if they cost more than $400, a number of dealers have been having good success on their appeals to FHA district offices. In fact, of all those reporting that they have tried such appeals, not one reports a definite rejection. This is, of course, an accidental situation, and there have been rejections somewhere, but with none showing up in these reports it is obvious that very few are rejected.

These dealers did not yet get approvals on all appeals filed, but those not approved are still hanging fire. Only one-sixth of the reporting dealers have filed any appeals, and their record is 48% approvals to 52% still in abeyance. The plan had only been in effect two months to the date of reporting so apparently many of the appeals were relatively new. If the experiences of these dealers are representative, which they usually are, then the total industry has filed only about 1,500 appeals. If more dealers realized that their appeals would probably be allowed, more would be filed, and no doubt will be in future.

◈

Rubert J. Lindquist, financial vice-president of the Standard Oil Co. (Indiana) has been elected to the Board of Directors, succeeding *Edward G. Seubert,* who resigned on his 70th birthday after 54 years with the company.

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ROTARY and PRESSURE ATOMIZING TYPES

Dealer and Distributor Inquiries Invited.

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FURNACES and WATER HEATERS

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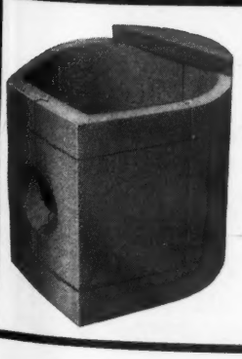

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WAR ON WASTE!

Increase efficiency of oil by keeping heating unit free from excess soot. All oil soot in fire chamber and flues vanishes instantly when sprayed with E-Z Fuel Oil Soot Destroyer.

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PRICE CALCULATOR for alcohol, turpentine, linseed oil, solvents, kerosene, fuel oils and gasolines. 250 charts ranging from .001 to .209 per gallon in tenth and quarter cents. Charts complete with stand $47.50. For fuel oil dealers we have Calculator ranging from .05 to .11 cents, in tenths only. 61 charts complete with stand $27.50. Each chart shows amounts from 1 to 999 gals. Any individual chart with celluloid holder $1.00. Degree Day Systems, Woodside, N. Y.

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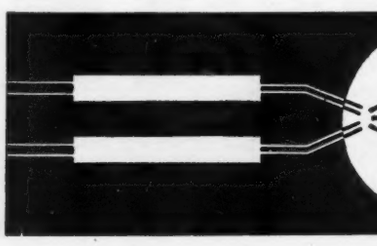

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